JOURNAL 30

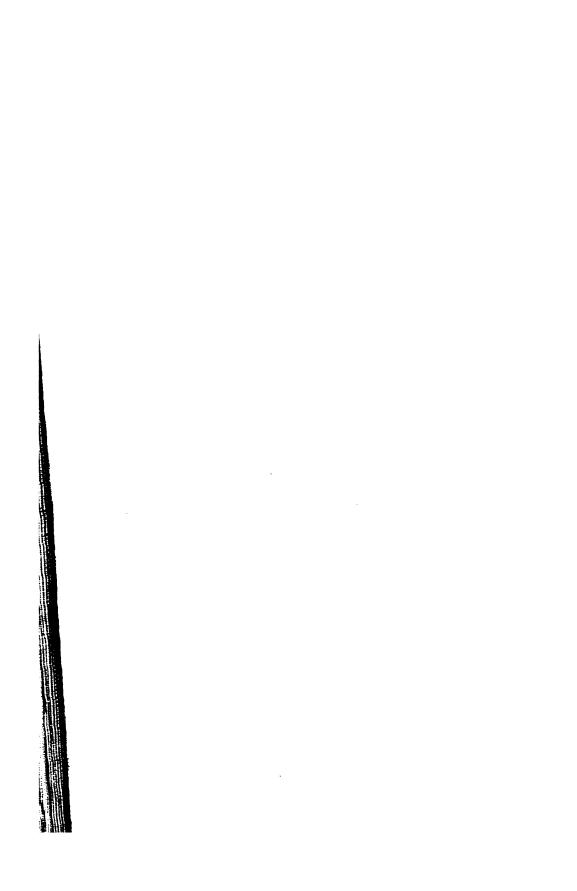
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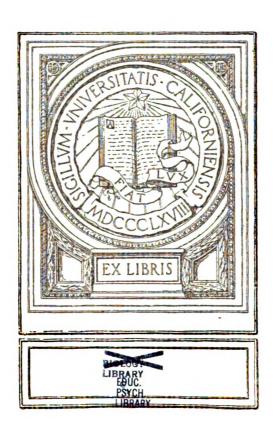
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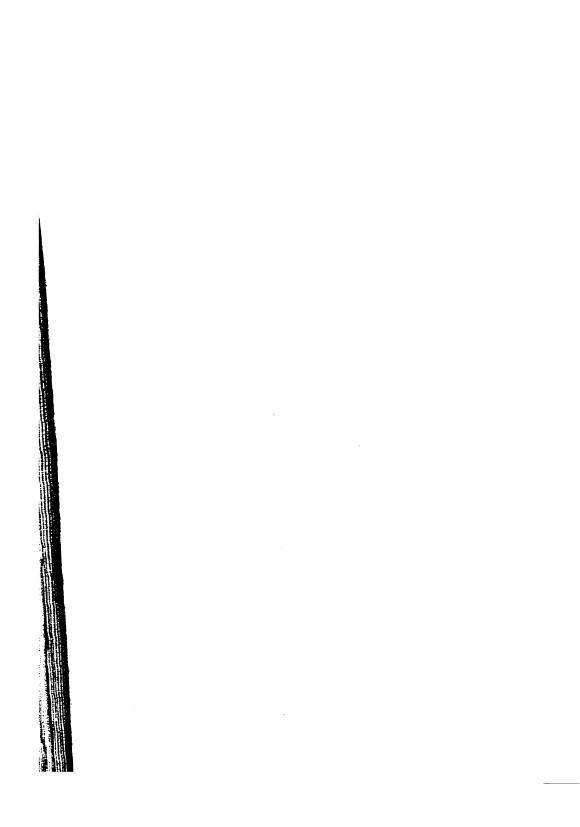






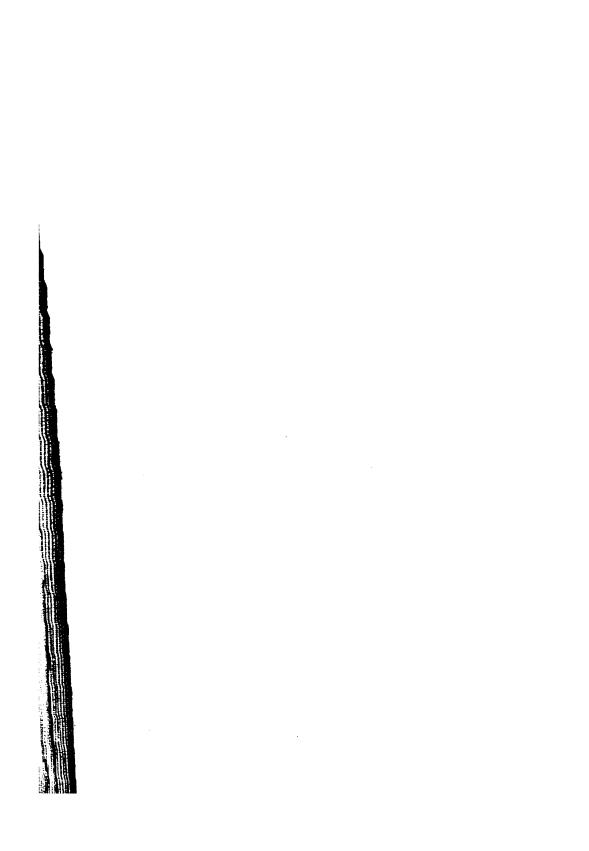


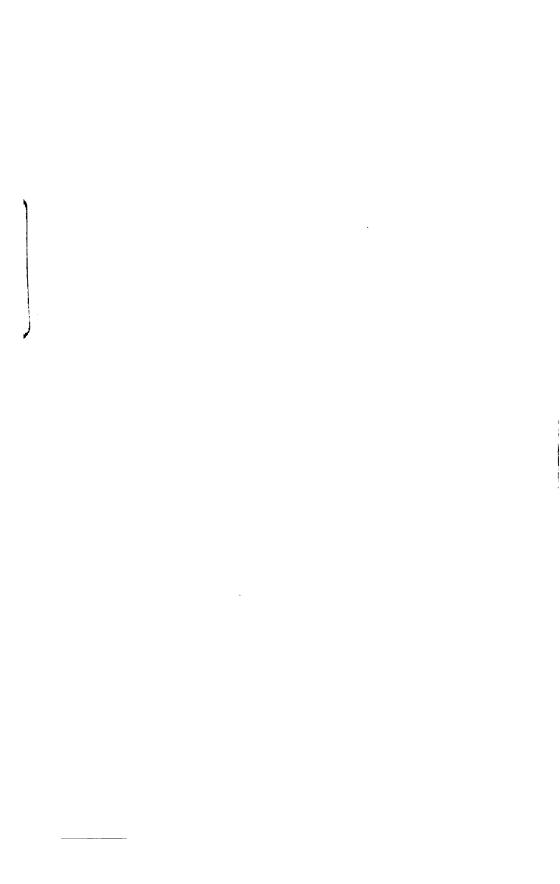


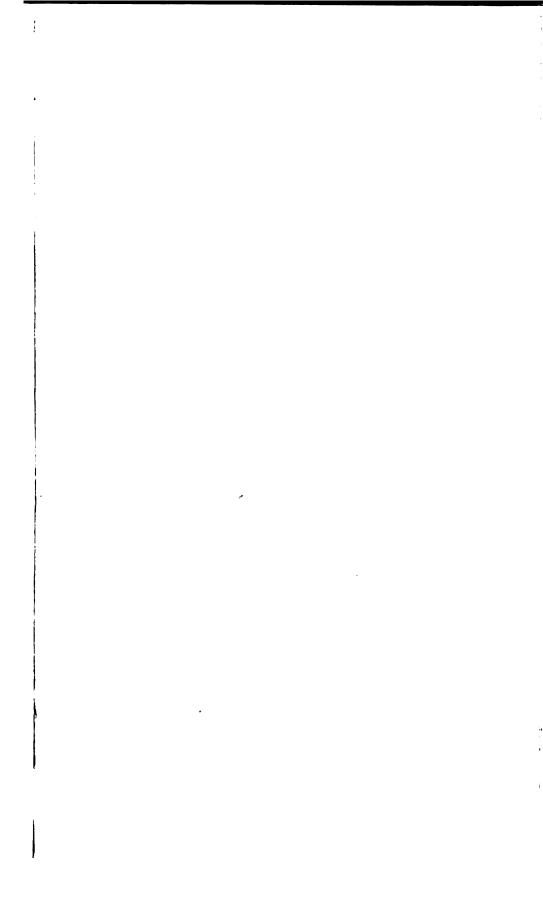


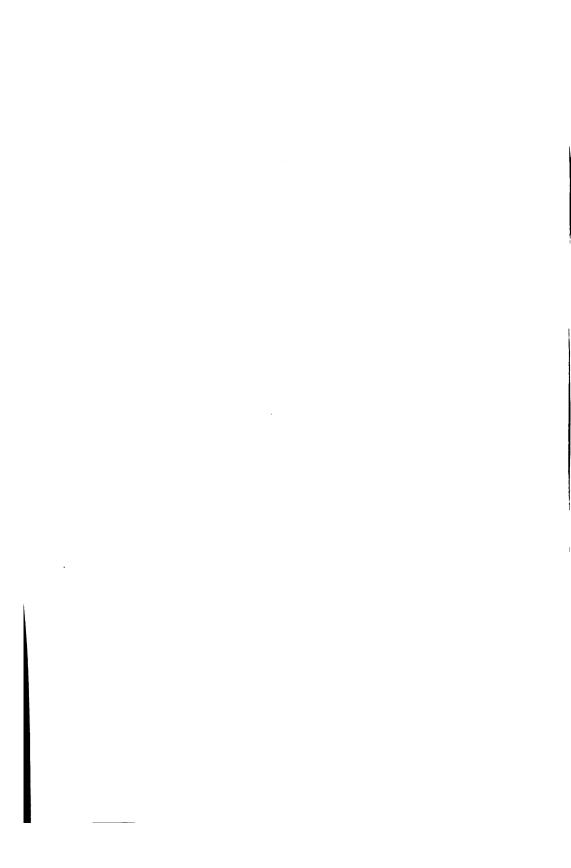












## THE JOURNAL

OF

# MENTAL SCIENCE.

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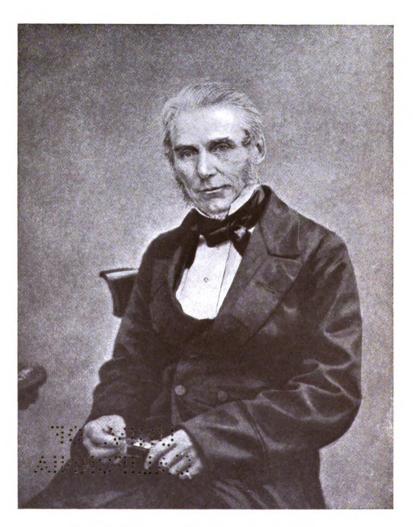
#### LONDON:

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MDCCCCXXVI.

"In adopting our title of the Journal of Mental Science, published by authority of the Medico-Psychological Association, we profess that we cultivate in our pages mental science of a particular kind, namely, such mental science as appertains to medical men who are engaged in the treatment of the insane. But it has been objected that the term mental science is inapplicable, and that the term mental physiology or mental pathology, or psychology, or psychiatry (a term much affected by our German brethren), would have been more correct and appropriate; and that, moreover, we do not deal in mental science, which is properly the sphere of the aspiring metaphysical intellect. If mental science is strictly synonymous with metaphysics, these objections are certainly valid; for although we do not eschew metaphysical discussion, the aim of this JOURNAL is certainly bent upon more attainable objects than the pursuit of those recondite inquiries which have occupied the most ambitious intellects from the time of Plato to the present, with so much labour and so little result. But while we admit that metaphysics may be called one department of mental science, we maintain that mental physiology and mental pathology are also mental science under a different aspect. While metaphysics may be called speculative mental science, mental physiology and pathology, with their vast range of inquiry into insanity, education, crime, and all things which tend to preserve mental health, or to produce mental disease, are not less questions of mental science in its practical, that is in its sociological point of view. If it were not unjust to high mathematics to compare it in any way with abstruse metaphysics, it would illustrate our meaning to say that our practical mental science would fairly bear the same relation to the mental science of the metaphysicians as applied mathematics bears to the pure science. In both instances the aim of the pure science is the attainment of abstract truth; its utility, however, frequently going no further than to serve as a gymnasium for the intellect. In both instances the mixed science aims at, and, to a certain extent, attains immediate practical results of the greatest utility to the welfare of mankind; we therefore maintain that our JOURNAL is not inaptly called the Journal of Mental Science, although the science may only attempt to deal with sociological and medical inquiries, relating either to the preservation of the health of the mind or to the amelioration or cure of its diseases; and although not soaring to the height of abstruse metaphysics, we only aim at such metaphysical knowledge as may be available to our purposes, as the mechanician uses the formularies of mathematics. This is our view of the kind of mental science which physicians engaged in the grave responsibility of caring for the mental health of their fellow-men may, in all modesty, pretend to cultivate; and while we cannot doubt that all additions to our certain knowledge in the speculative department of the science will be great gain, the necessities of duty and of danger must ever compel us to pursue that knowledge which is to be obtained in the practical departments of science with the earnestness of real workmen. The captain of a ship would be none the worse for being well acquainted with the higher branches of astronomical science, but it is the practical part of that science as it is applicable to navigation which he is compelled to study."-Sir J. C. Bucknill, M.D., F.R.S. (Yourn. Ment. Sci., vol. vii, 1861, p. 137).

iki, op Oktober JOURNAL OF MENTAL SCIENCE, JANSVORY, 1926.



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  - (v) Private Asylums and Mental Hospitals: The Old Manor, Camberwell House, Peckham House, Brislington House, Ticehurst, Northumberland House, The Priory. Middleton Hall and Bailbrook House (for Female Nurses only).
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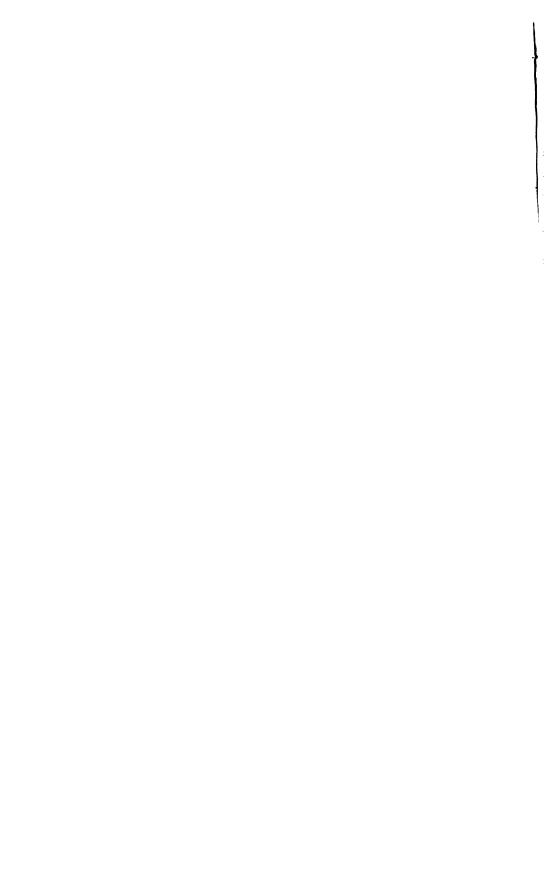
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- A. J. Sutherland, M.D., St. Luke's Hospital, London. 1854.
- 1855. J. Thurnam, M.D., Wilts County Asylum.
- J. Hitchman, M.D., Derby County Asylum. 1856.
- Forbes Winslow, M.D., Sussex House, Hammersmith. 1857.
- 1858. John Conolly, M.D., County Asylum, Hanwell.
- 1859. Sir Charles Hastings, D.C.L.
- 186o. J. C. Bucknill, M.D., Devon County Asylum.
- 1861. Joseph Lalor, M.D., Richmond Asylum, Dublin.
- 1862. John Kirkman, M.D., Suffolk County Asylum.
- 1863. David Skae, M.D., Royal Edinburgh Asylum.
- 1864. Henry Munro, M.D., Brook House, Clapton.
- 1865. Wm. Wood, M.D., Kensington House.
- 1866. W. A. F. Browne, M.D., Commissioner in Lunacy for Scotland.
- C. A. Lockhart Robertson, M.D., Haywards Heath Asylum. 1867.
- 1868. W. H. O. Sankey, M.D., Sandywell Park, Cheltenham.
- 1869. T. Laycock, M.D., Edinburgh.
- Robert Boyd, M.D., County Asylum, Wells. 1870.
- Henry Maudsley, M.D., The Lawn, Hanwell. 1871.
- Sir James Coxe, M.D., Commissioner in Lunacy for Scotland. 1872.
- Harrington Tuke, M.D., Manor House, Chiswick. 1873.
- 1874. T. L. Rogers, M.D., County Asylum, Rainhill.
- 1875.
- J. F. Duncan, M.D., Dublin. W. H. Parsey, M.D., Warwick County Asylum. 1876.
- G. Fielding Blandford, M.D., London. 1877.
- 1878. Sir J. Crichton-Browne, M.D., Lord Chancellor's Visitor.
- J. A. Lush, M.D., Fisherton House, Salisbury. 1879.
- 1880. G. W. Mould, M.R.C.S., Royal Asylum, Cheadle.
- 1881. D. Hack Tuke, M.D., London.
- Sir W. T. Gairdner, M.D., Glasgow. 1882.
- 1883. W. Orange, M.D., State Criminal Lunatic Asylum, Broadmoor.
- 1884. Henry Rayner, M.D., County Asylum, Hanwell.
- J. A. Eames, M.D., District Asylum, Cork. 1885.
- 1886. Sir Geo. H. Savage, M.D., Bethlem Royal Hospital.
- Sir Fred. Needham, M.D., Barnwood House, Gloucester. 1887.
- Sir T. S. Clouston, M.D., Royal Edinburgh Asylum. 1888#
- 1889. H. Hayes Newington, F.R.C.P., Ticehurst, Sussex.
- David Yellowlees, M.D., Gartnavel Asylum, Glasgow. E. B. Whitcombe, M.R.C.S., City Asylum, Birmingham. 1800.
- 1891.
- Robert Baker, M.D., The Retreat, York. 1892.
- 1893. J. Murray Lindsay, M.D., County Asylum, Derby.
- 1894. Conolly Norman, F.R.C.P.I., Richmond Asylum, Dublin.
- David Nicolson, C.B., M.D., State Criminal Lunatic Asylum, Broadmoor. 1895.
- 1896.
- William Julius Mickle, M.D., Grove Hall Asylum, Bow. Thomas W. McDowall, M.D., Morpeth, Northumberland. 1897.
- A. R. Urquhart, M.D., James Murray's Royal Asylum, Perth. 1898.
- J. B. Spence, O.B.E., M.D., Burntwood Asylum, nr. Lichfield, Stafford-1899. shire.
- Fletcher Beach, M.B., 79, Wimpole Street, W. 1. 1000.

- 1901. Oscar T. Woods, M.D., District Asylum, Cork, Ireland.
- 1002. J. Wiglesworth, M.D., Rainhill Asylum, near Liverpool.
- Ernest W. White, C.B.E., M.B., City of London Asylum, Stone, Dartford.
- 1904. R. Percy Smith, M.D., 36, Queen Anne Street, Cavendish Square, London, W. 1.
- 1905. T. Outterson Wood, M.D., 40, Margaret Street, Cavendish Square, London, W. 1.
- Sir Robert Armstrong-Jones, C.B.E., M.D., Claybury Asylum, Woodford 1906. Bridge, Essex.
- P. W. MacDonald, M.D., County Asylum, Dorchester. 1907.
- 1908.
- Chas. A. Mercier, M.D., 34, Wimpole Street, London, W. 1. W. Bevan-Lewis, M.Sc., West Riding Asylum, Wakefield. 1909.
- Sir John Macpherson, M.D., Commissioner in Lunacy for Scotland. 1910.
- 1911. Wm. R. Dawson, O.B.E., M.D., Inspector of Lunatic Asylums, Dublin Castle, Dublin.
- J. Greig Soutar, M.B., Barnwood House, Gloucester.
- James Chambers, M.D., The Priory, Roehampton, S.W. 1913.
- 1914-18. David G. Thomson, C.B.E., M.D., County Asylum, Thorpe, Norfolk. 1918. John Keay, C.B.E., M.D., Bangour Village, Uphall, Linlithgowshire.
- Bedford Pierce, M.D., The Retreat, York. 1919.
- 1920. William F. Menzies, M.D., Staffordshire County Mental Hospital, Cheddleton, near Leek.
- 1921. C. Hubert Bond, C.B.E., M.D., Commissioner of the Board of Control.
- 1922. G. M. Robertson, M.D., Royal Hospital, Morningside, Edinburgh.
- Edwin Goodall, C.B.E., M.D., City Mental Hospital, Cardiff. 1923.
- 1924. Michael J. Nolan, L.R.C.P.&S.Irel., District Asylum, Downpatrick, Ireland.
- 1925. Sir Frederick W. Mott, K.B.E., LL.D., M.D., F.R.S., 25, Nottingham Place, W. 1.

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- 1922. Sir M. Craig, C.B.E., M.A., M.D., F.R.C.P.
- Charles Kirk Clarke, LL.D., M.D. 1923.
- 1924. J. Carswell, F.R.F.P.S.Glasg.
- 1925. Joseph Shaw Bolton, D.Sc., M.D., F.R.C.P.
- 1926. George M. Robertson, M.D., F.R.C.P.



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- Bianchi, Il Senatore Leonardo, Musee N. 3, Naples, Italy. (Corr. Mem., 1896.)
- 1900. Blumer, G. Alder, M.D., L.R.C.P.Edin., Superintendent Emeritus Butler Hospital; 196, Blackstone Boulevard, Providence, R.I.,
- U.S.A. (Ord. Mem., 1890.) 1900. Bresler, Johannes, M.D., Sanitätsrat, Director of the Provincial Mental Hospital, Kreuzburg, Oberschlesien, Germany. (Editor of the Psychiatrisch-neurologische Wochenschrift.) (Corr. Mem., 1896.)
- Brush, Edward N., M.D., Superintendent Emeritus, Sheppard and IQ02. Enoch Pratt Hospital, Townson, Maryland; Hamilton Road, Mount Washington, Baltimore, Md., U.S.A.
- Chamberlain, Rt. Hon. Arthur Neville, M.P., 37, Egerton Crescent, 1925. S.W. 3.
- 1920. Colin, Dr. H., Secrétaire Général de la Société Médico-Psychologique de Paris, 26, Rue Vanquelin, Paris (Ve), France.
  1909. Collins, Sir Wm. Job, K.C.V.O., D.L., B.Sc., M.D., M.S., F.R.C.S.,
- 1, Albert Terrace, Regent's Park, N.W. 1.
- Considine, Thomas Ivory, F.R.C.S., L.R.C.P.Irel., Inspector of Lunatic 1012. Asylums, Ireland, Office of Lunatic Asylums, Dublin Castle, Dublin.
- Cooke, Sir (Edward) Marriott, K.B.E., M.B.Lond., Honorary Commis-1918. sioner, Board of Control, 9, Colherne Court, South Kensington, S.W. 5.
- 1902. Coupland, Sidney, M.D., F.R.C.P., Wootton Ridge, Boar's Hill, Oxford.
- Crichton-Browne, Sir J., LL.D., D.Sc., M.D.Edin., F.R.S., 45, Hans Place, London, S.W. 1. (President, 1878.) 1876.
- Dawson, Col. W. R., O.B.E., B.A., M.B., B.Ch.Dubl., F.R.C.P.Irel., M.P.C., D.P.H., Chief Medical Officer, Ministry of Home Affairs, 1924.
- North Ireland, 26, Windsor Park, Belfast. (Ord. Mem., 1894.)
  1911. Donkin, Sir Horatio Bryan, M.A., M.D.Oxon., F.R.C.P., Medical Adviser to Prison Commissioners and Director of Convict Prisons, 28, Hyde Park Street, London, W. 2.
- 1925. Drummond, Sir David, C.B.E., M.A., D.C.L., M.D., J.P., 6, Saville Place, Newcastle-on-Tyne.
- Ellis, Henry Havelock, L.S.A., 14, Dover Mansions, Canterbury Road, 1923. Brixton, S.W. 9.
- 1895. Ferrier, Sir David, LL.D., D.Sc., M.D., F.R.C.P., F.R.S., 34, Cavendish Square, London, W. 1.
- 1900. Kraepelin, Dr. Emil, Professor of Psychiatry, The University, Munich.
- 1922. L'hermitte, Dr. Jacques Jean, Médecin de l'Hospice Paul Brousse, Paris; 9, rue Marbeuf, Paris 8e, France.

  1924. McDongall, William, M.B., F.R.S., Professor of Psychology in Harvard
- University, U.S.A.
- Macpherson, Sir John, K.B.E., C.B., M.D., C.M., F.R.C.P.Edin., Pro-IQIO. fessor of Psychiatry, University of Sydney, Sydney, N.S.W. (PRESIDENT, 1910-11.)
- Maudsley, Sir Henry Carr, K.C.M.G., C.B.E., M.D., B.S., F.R.C.P., Consulting Physician, Melbourne Hospital, Victoria; 8, Collins IQ21. Street, Melbourne.
- 1922. Pactet, Dr. François Florentine, Médecin en chef de l'Asile de Villejuif, Paris; 94, Avenue de la République, Villejuif, Seine, France.
- 1923. Rose, Sir Arthur, D.S.O., Chairman of the General Board of Control for Scotland, 25, Palmerston Place, Edinburgh.
- Sandhurst, Lord, Barrister-at-Law; Lord Chancellor's Visitor in Lunacy, Royal Courts of Justice, Strand, W.C.

1911. Semelaigne, Dr. Réné, Secrétaire des Séances de la Société Medico-Psychologique de Paris, 59, Boulevard de Montmorency, Paris XVI, France. (Corresponding Member from 1893.)

1922. Smith, William Charles Clifford, Esq., O.B.E., F.R.I.B.A., M.I.C.E., Dudley Lodge, Wallington, Surrey.

1901. Toulouse, Dr. Edouard, Médecin des Asiles de la Seine, Directeur du Laboratoire de Psychologie experimental à l'École des Hautes Études, Paris; Laboratoire de Psychologie Expérimentale, 1, Rue Cabanis, Paris, XIVe, France.

1923. Willis, Sir Frederick James, K.B.E., C.B., Chairman of the Board of Control for England, 66, Victoria Street, London, S.W. 1.

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- 1911. Boedeker, Prof. Dr. Justus Karl Edmund, Privat Docent and Director, Fichtenhof Asylum, Schlachtensee, Berlin.
- 1923. Briggs, L. Vernon, M.D., 64, Beacon Street, Boston, Mass., U.S.A.

1897. Buschan, Dr. G., Stettin, Germany.

- 1904. Coroleŭ, Wilfrid, Medico forense del distrito de la Barceloneta, Aribau, 31, pral, Chaflan Consejo Ciento de 7 à 8, Spain.
- 1924. Cotton, Henry A., M.D., A.M., Medical Director, State Hospital, Trenton, New Jersey, U.S.A.

1896. Cowan, F. M., M.D., 109, Perponcher Straat, The Hague, Holland.

- 1911. Falkenberg, Dr. Wilhelm, Sanitätstrat, Direktor der Berliner, Torenanstalt, Herzberge, Berlin-Lichtenberg.
- 1907. Ferrari, Giulio Cesare, M.D., Director of the Manicomio Provinciale,
  Imola, Bologna, Italy.
- 1911. Friedlander, Prof. Dr. Adolf Albrecht, Haus Sonnblick, Littenweiler, bei Freiburg i/Baden, Germany.
- 1901. Gommès, Dr. Marcel, 5, Rue Parrot, Paris XII.

1922. Kure, Prof. Schuzo, Tokyo University, Japan.

1909. Moreira, Prof. Dr. Juliano, Directeur General de l'Assistance aux Aliénées; President de la Société Bresilienne de Neurologie et Psychiatrie; Praia da Saudade 288, Rio de Janeiro, Brazil.

1922. Morowoka, Dr., Kyushu University, Japan.

1909. Pilcz, Dr. Alexander, VIII/2 Alserstrasse 43, Wien, Austria.

1922. Sano, Dr., Gheel, Belgium.

1924. Winkler, C., M.D., Professor of Psychiatry and Neurology, Utrecht University, Holland.

#### ORDINARY MEMBERS OF THE ASSOCIATION.

- Alphabetical List of Ordinary Members of the Association on January 1, 1926, with the year in which they joined.
- 1891. Adair, Thomas Stewart, M.D., C.M.Edin., F.R.M.S., Medical Superintendent, Storthes Hall Mental Hospital, Kirkburton, near Huddersfield. (Hon. Sec. N. and M. Division, 1908-20.)
- 1910. Adam, George Henry, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, West Malling Place, Kent.
- z868. Adams, Josiah Oake, M.D.Durh., L.S.A., F.R.C.S.Eng., J.P., 117, Cazenove Road, Stamford Hill, London, N. 16.
- 1919. Adey, J. K., M.B., C.M.Melb., Sunbury, Victoria, Australia.
- 1886. Agar, S. Hollingsworth, jun., B.A.Camb., M.R.C.S.Eng., L.S.A., Hurst House, Henley-in-Arden.
- 1923. Ahern, John Maurice, M.B., B.Ch., R.U.I., L.R.C.P.&S.Irel., Senior Medical Officer, H.M. Prison, Liverpool.
- Ainsworth, Cyrus Gerald, M.A., LL.B., M.B., B.Ch.Camb., M.R.C.S., L.R.C.P.Lond., Deputy Medical Superintendent, Rainhill Mental Hospital, nr. Liverpool; Elton, Bury, Lancs.
- 1924. Alexander, Douglas Reid, M.R.C.S., L.R.C.P.Lond., D.P.M., Assistant Medical Officer, London County Mental Hospital, Bexley, Kent.
- 1899. Alexander, Hugh de Maine, M.D., C.M.Edin., Medical Superintendent, Kingseat Mental Hospital, Newmacher, Aberdeen.
- IQ22. Alexander, Marion Cameron, M.B., B.Cb.Belf., Assistant Physician, Royal Hospital, Morningside, Edinburgh.
- 1899. Allman, Dorah Elizabeth, M.B., B.Ch.R.U.I., Assistant Medical Officer, District Asylum, Armagh.
- Anderson, James Richard Sumner, M.B., Ch.B.Glasg., Senior Assistant Medical Officer, Cumberland and Westmorland Mental Hospital, Garlands, Carlisle.
- 1898. Anderson, John Sewell, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Hull City Mental Hospital, Willerby.
- Anderson, William, M.B., Ch.B.Aberd., Senior Assistant Physician, Royal Hospital, Aberdeen.
- 1918. Anderson, William Kirkpatrick, M.B., Ch.B.Glasg., F.R.F.P.S.Glasg., Medical Officer, Dykebar Hospital for Insane Soldiers, Paisley; 2, Woodside Crescent, Glasgow. (Lect. on Ment. Dis., Andr. Coll., Glasg.)
- 1912. Annandale, James Scott, M.B., Ch.B.Aberd., D.P.M., Senior Assistant Physician, Royal Hospital, Aberdeen.
- 1912. Apthorp, Frederick William, M.R.C.S.Eng., L.R.C.P.Edin., M.P.C., "Mulgrave," Church Road, Burgess Hill, Sussex.

  1904. Archdale, Mervyn Alex., M.B., B.S.Durh., D.P.M., Medical Superintendent, Sunderland Borough Mental Hospital, Ryhope.
- **2905.** Archdall, Mervyn Thomas, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., L.S.A. Lond., St. Denys, New Milton, Hants.
- 1882. Armstrong-Jones, Sir Robert, C.B.E., D.Sc.Wales, M.D., B.S., F.R.C.P. Lond., F.R.C.S.Eng., F.S.A., D.L., J.P., Lord Chancellor's Visitorin-Lunacy, 9, Bramham Gardens, London, S.W. 5 (and Plâs Dinas, (Gen. Secretary from 1897 to 1906.) Carnarvon, North Wales).
- (PRESIDENT, 1906-7.) (Gresham Prof. of Physic.)
  1910. Auden, George Augustus, M.A., M.D., B.Ch.Camb., F.R.C.P.Lond., D.P.H.Camb., F.S.A., School Medical Officer, Education Office, Council House, Margaret Street, Birmingham.
- 1891. Aveline, Henry Talbot Sydney, M.D.Durh., M.R.C.S., L.R.C.P.Lond. M.P.C., Medical Superintendent, Somerset and Bath County Asylum, Cotford, near Taunton. (Hon. Sec. for S.W. Division, 1905-11.)
- 1922. Back, Frederick, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer and Pathologist, South Yorkshire Mental Hospital, Sheffield.

- 1909. Bain, John, M.A., M.B., B.Ch.Glasg., Medical Superintendent, Derby Borough Mental Hospital, Rowditch.
- 1913. Bainbridge, Charles Frederick, M.B., Ch.B.Edin., Assistant Medical Officer, Devon County Mental Hospital, Exminster.
- 1906. Baird, Harvey, M.D., Ch.B.Edin., Medical Superintendent, Periteau Private Asylum, Winchelsea, Sussex.
- 1923. Baker, Geoffrey Thomas, M.C., L.M.S.S.A., D.P.M., Assistant Medical Officer, Kent County Mental Hospital, Chartham Down, near Canterbury.
- 1878. Baker, Hy. Morton, M.B., C.M.Edin., 65, Cole Park Road, Twickenham.
- 1922. Banbury, Percy, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, West Park Mental Hospital, Epsom, Surrey.
- 1922. Barclay, Rachel Mary, M.A., M.D., Dipl. Psych. Edin., 2, W. Cross-causeway, Edinburgh.
- 1904. Barham, Guy Foster, M.A., M.D., B.Ch.Camb., M.R.C.S., L.R.C.P. Lond., Medical Superintendent, Claybury Mental Hospital, Woodford Bridge, Essex.
- 1919. Barkas, Mary Rushton, M.Sc.N.Z., M.D., B.S., M.R.C.S., L.R.C.P. Lond., D.P.M., Assistant Medical Officer, The Maudsley Hospital. Denmark Hill, S.E. 5; 46, Connaught Street, W. 2.
- Denmark Hill, S.E. 5; 46, Connaught Street, W. 2.

  1923. Barnes, Francis Gregory Lawson, M.R.C.S., L.R.C.P.Lond., D.P.M.,
  Assistant Medical Officer, London County Mental Hospital,
  Colney Hatch, New Southgate, N. 11.
- 1910. Bartle't, George Norton, M.B., B.S., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, County Mental Hospital, Mickleover, Derby. (Secretary South-Western Division, 1916-22.)
- 1923. Barton, Michael, L.R.C.P.&S.Irel., Lixnaw, co. Kerry.
- 1901. Baskin, J. Lougheed, M.D.Brux., L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., F.R.I.P.H., c/o Messrs. Glyn Mills & Co., 3, Whitehall Place, S.W. 1.
- 1902. Baugh, Leonard Dieckmann Hamilton, M.B., Ch.B.Edin., The Pleasaunce, York.
- 1874. Beach, Fletcher, M.B., F.R.C.P.Lond., 5, De Crespigny Park, Denmark Hill, S.E. 5. (Secretary Parliamentary Committee, 1896-1906. General Secretary, 1889-1896. PRESIDENT, 1900-01.)
- 1892. Beadles, Cecil F., M.R.C.S., L.R.C.P.Lond., Gresham House, Egham Hill, Egham.
- 1921. Beaton, Thomas, O.B.E., M.D., B.S., M.R.C.S., M.R.C.P.Lond., Senior Assistant Physician, Bethlem Royal Hospital, London, S.E. 1. (Lect. on Ment. Dis., Bethlem Royal Hospital.)
- 1913. Bedford, Percy William Page, M.D., Ch.B., Dipl. Psych. Edin., Deputy Medical Superintendent, Dorset County Mental Hospital, Herrison, near Dorchester.
- 1909. Beeley, Arthur, M.Sc.Leeds, M.D., B.S., M.R.C.S., L.R.C.P.Lond., D.P.H., Assistant Medical Officer, E. Sussex Educational Committee, Windybank, King Henry's Road, Lewes.
- 1922. Bell, Andrew Allan, M.B., Ch.B.Glasg., D.P.M., Pathologist and Assistant Medical Officer, Hawkhead Mental Hospital, Cardonald, N.B.
- 1914. Bennett, James Wodderspoon, M.R.C.S., L.R.C.P.Lond., Marsden, Babbacombe Road, Torquay.
- 1914. Benson, John Robinson, F.R.C.S., L.R.C.P.Lond., Resident Physician, Fiddington House, Market Lavington, Wilts, and Laverstock House, Salisbury.
- 1899. Beresford, Edwyn H., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Tooting Bec Mental Hospital, Tooting, London, S.W. 17.
- 1922. Berkeley-Hill, Owen A. R., M.D., B.Ch.Oxon., M.R.C.S.Eng., Major I.M.S., Medical Superintendent, Mental Hospital for Europeans, Ranchi, Bihar and Orissa, India.
- 1912. Berncastle, Herbert Melbourne, M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer, Croydon Mental Hospital, Warlingham, Surrey.

- 1920. Birch, William Somerset, M.C., M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Jamaica Mental Asylum, Kingston, Jamaica.
- 1894. Blachford, James Vincent, C.B.E., M.D., B.S.Durh., M.R.C.S., L.R.C.P. Lond., M.P.C., 1, Victoria Square, Clifton, Glos.
- 1898. Blair, David, M.A., M.D., C.M.Glasg., Medical Superintendent, Lancashire County Mental Hospital, Prestwich, Manchester.
- 1919. Blake, Stanley, L.R.C.P.&S.Irel., Assistant Medical Officer, Portrane Asylum, Donabate, Ireland.
- 1918. Blandford, Walter Folliott, B.A.Camb., M.R.C.S., L.R.C.P.Lond., Devonshire Club, S.W. 1.
- 1904. Bodvel-Roberts, Hugh Frank, M.A.Camb., M.R.C.S., L.R.C.P.Lond., L.S.A., Senior Assistant Medical Officer, Napsbury Mental Hospital, near St. Albans, Herts.
- 1920. Boland, James Joseph, M.B., B.Ch.N.U.I., Assistant Medical Officer, House of St. John of God, Stillorgan, co. Dublin.
- 1900. Bolton, Joseph Shaw, D.Sc., M.D., B.S., F.R.C.P.Lond., Medical Superintendent, West Riding Mental Hospital, Wakefield. (Prof. of Ment. Dis. Univ. of Leeds.)
- 1892. Bond, Charles Hubert, C.B.E., D.Sc., M.D., C.M.Edin., F.R.C.P.Lond., M.P.C., Commissioner of the Board of Control, 66, Victoria Street, London, S.W. 1. (Hon. General Secretary, 1906-12.) (PRESIDENT, 1921-22.)
- 1922. Bostock, John, M.B., B.S., M.R.C.S., L.R.C.P.Lond., D.P.M., Senior Medical Officer, The Mental Hospital, Callan Park, Sydney, N.S.W.
- 1920. Bowen, Tudor David John, M.R.C.S., L.R.C.P.Lond., Cae Cob, St. Mellons, near Cardiff.
- 1918. Bower, Cedric William, L.M.S.S.A.Lond., Joint Medical Officer, Spring-field House, near Bedford.
- 1877. Bower, David, M.D., C.M.Aberd., L.R.C.P.&S.Glasg., Springfield House, Bedford. (Chairman, Parliamentary Committee, 1907-1910.)
- 1917. Bowie, Edgar Ormond, L.A.H.Dubl., D.P.H., Medical Superintendent, Stretton House, Church Stretton, Shropshire.
- 1896. Boycott, Arthur N., M.D., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Gombards House, St. Albans, Herts. (Hon. Sec. for S.E. Division, 1900-05.)
- 1898. Boyle, A. Helen A., M.D.Brux., L.R.C.P.&S.Edin., 9, The Drive, Hove, Brighton.
- 1922. Bramwell, Edwin, M.D., F.R.C.P.Edin. & Lond., F.R.S.Edin., Physician to the Royal Infirmary, Edinburgh, 23, Drumsheugh Gardens, Edinburgh. (Prof. of Clin. Med., Univ. of Edinburgh.)
- Edinburgh. (Prof. of Clin. Med., Univ. of Edinburgh.)

  1911. Brander, John, M.B., C.B.Edin., D.P.M., Deputy Medical Superintendent, London County Mental Hospital, Bexley, Kent.
- 1919. Branthwaite, Robert Welsh, C.B., M.D.Brux., M.R.C.S., L.R.C.P.Lond., D.P.H., Commissioner of the Board of Control, 66, Victoria Street, London, S.W. 1.
- 1925. Brennan, Richard Dominick, M.B., B.Ch., N.U.I., Assistant Medical Officer, District Mental Hospital, Waterford, Ireland.
- 1922. Brock, Arthur John, M.D., Ch.B.Edin., 8, Rothesay Place, Edinburgh.
- 1924. Brown, Basil William, M.B., B.S.Lond., D.P.M., The Priory, Roehampton, S.W. 15.
- 1924. Brown, George, M.B., B.Ch.Glasg., Assistant Medical Officer, South Yorkshire Mental Hospital, Sheffield.
- 1905. Brown, Harry Egerton, M.D., Ch.B.Glasg., M.P.C., c/o Digby S. Brown, 116, Hope Street, Glasgow.
- 1923. Brown, Malcolin, M.B., Ch.B.Glasg., Assistant Physician and Pathologist, Gartloch Mental Hospital, Gartloch, N.B.
- 1908. Brown, R. Dods, M.D., Ch.B., F.R.C.P.Edin., Dipl. Psych., D.P.H., Medical Superintendent, The Royal Asylum, Aberdeen.
- 1912. Brown, William, M.D., C.M.Glasg., M.P.C., Medical Officer, Stoke Park Colony; 1, Manor Road, Fishponds, Bristol.

- 1916. Brown, William, D.Sc.Lond., M.A., M.D., B.Ch.Oxon., 88, Harley Street, London, W. 1. (Wilde Reader in Mental Philosophy, Univ. Oxford.)
- 1917. Bruce, Alexander Ninian, D.Sc., M.D., F.R.C.P.Edin., 8, Ainslie Place, Edinburgh. (Lect. on Neurology, Univ. of Edin.)
- 1893. Bruce, Lewis C., M.C., M.D., F.R.C.P.Edin., M.P.C., Medical Superintendent, District Asylum, Druid Park, Murthly, N.B. (Co-Editor of Journal, 1911-1916; Hon. Sec. for Scottish Division, 1901-1907.)
- 1913. Brunton, George Llewellyn, M.D., Ch.B.Edin., Medical Superintendent,
  Nottingham City Mental Hospital, Mapperley Hill.
- 1920. Bryce, William Henderson, M.B., C.M.Edin., Resident Physician, Kenlaw House, Colinsburgh, Fife.
- 1912. Buchanan, William Murdoch, M.B., Ch.B.Glasg., Medical Superintendent, Kirklands Asylum, Bothwell, Lanarkshire. (Hon. Sec. for Scottish Division from 1920.)
- 1912. Burke, Joseph Dominick Gabriel, M.B., B.Ch.R.U.I., Deputy Medical Superintendent, St. Audrey's Hospital, Melton, Suffolk.
- 1924. Bushe, Charles Kendal, O.B.E., B.A., M.D.Dubl., Surgeon-Commander in Charge, Royal Naval Hospital, Great Yarmouth.
- 1921. Butcher, Walter Herbert, M.A., M.B., B.Ch.Oxon., M.R.C.S., L.R.C.P. Lond., Lane End, Runfold, Farnham, Surrey.
- 1921. Buzzard, Edward Farquhar, M.A., M.D.Oxon., F.R.C.P.Lond., Physician to the National Hospital for the Paralysed, Queen Square, W.C.; 78, Wimpole Street, London, W.I.
- 1921. Caldicott, Charles Holt, M.B.E., M.B., M.R.C.S., L.R.C.P.Lond., Grantbourne, Chobham, Surrey.
- 1925. Cameron, Donald Ewan, M.B., Ch.B.Glasg., Assistant Medical Officer, Glasgow Royal Mental Hospital, Gartnavel, Glasgow.
- 1894. Campbell, Alfred Walter, M.D., C.M.Edin., M.P.C., Macquarie Chambers, 183, Macquarie Street, Sydney, New South Wales.
- 1909. Campbell, Donald Graham, M.B., C.M. Edin., F.S.A. Scotl., Medical Officer,
   District Asylum, "Auchinellan," 12, Reidhaven Street, Elgin.
   1897. Campbell, Robert Brown, M.D., C.M., F.R.C.P. Edin., Medical Super-
- 1897. Campbell, Robert Brown, M.D., C.M., F.R.C.P.Edin., Medical Superintendent, Stirling District Mental Hospital, Larbert. (Secretary for Scottish Division, 1910-20.)
- 1905. Carre, Henry, L.R.C.P.&S.Irel., Medical Superintendent, Woodilee Mental Hospital, Lenzie, Glasgow.
- 1925. Carson, Josephine Alcorn, L.R.C.P.&S.Ircl., Assistant Medical Officer, Farnham House, Finglas, Ireland.
- 1891. Carswell, John, F.R.F.P.S.Glasg., L.R.C.P.Edin., J.P., 14, Harley Street, W. 1.
- 1874. Cassidy, D. M., C.B.E., D.Sc.Edin., LL.D., M.D., C.M.McGill, F.R.C.S. Edin., Medical Superintendent, County Mental Hospital, Lancaster.
- 1922. Casson, Elizabeth, M.B., Ch.B.Bristol, D.P.M., Assistant Medical Officer, Holloway Sanatorium, Virginia Water, Surrey.
- 1888. Chambers, James, M.A., M.D.R.U.I., M.P.C., The Priory, Roehampton, London, S.W. 15. (Co-Editor of Journal, 1905-1914, Assistant Editor, 1900-05.) (President, 1913-14.) (Treasurer since 1917.) (Lect. on Ment. Dis., Middlesex Hosp.)
- 1911. Chambers, Walter Duncanon, M.A., M.D., Ch.B., M.R.C.P.Edin., M.P.C., Physician Superintendent, James Murray's Royal Asylum; Murray House, Perth.
- 1923. Chevens, Leslie Charles Frederick, M.R.C.S., L.R.C.P.Lond., D.P.M., Assistant Medical Officer, Cheshire County Mental Hospital, Parkside, Macclesfield.
- Chisholm, Percy, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Medical Superintendent, Queen Mary Hospital, Hammersprings, New Zealand.
- 1907. Chislett, Charles Game Angus, M.B., Ch.B.Glasg., F.R.F.P.S.Glasg., Superintendent, Stoneyetts, Chryston, Lanark.
- 1921. Cholmeley, Mountague Adye, M.R.C.S., L.R.C.P.Lond., D.P.M., Ministry of Pensions Hospital, Maghull, nr. Liverpool.

- 1880. Christie, Joseph William Stirling, L.R.C.P.&S.Edin., 21, St. Matthew's Gardens, St. Leonards-on-Sea.
- 1920. Clark, R. M., M.B., C.M.Edin., Medical Superintendent, County Mental Hospital, Whittingham, Preston.
- Clarke, Geoffrey, M.D.Lond., Medical Superintendent, London County Mental Hospital, Bexley, Kent.
- 1907. Clarkson, Robert Durward, B.Sc., M.D., C.M., F.R.C.P.Edin., Medical Officer, Scottish National Institute for the Education of Imbecile Children: The Park, Larbert, Stirlingshire.
- Children; The Park, Larbert, Stirlingshire.

  1925. Cobb, Geoffrey F., M.R.C.S., L.R.C.P.Lond., D.P.M., M.P.C., Senior
  Assistant Medical Officer, County Mental Hospital, Burntwood,
  Lichfield, Staffs.
- 1892. Cole, Robert Henry, M.D., F.R.C.P.Lond., 25, Upper Berkeley Street, London, W. 1. (Secretary of Parliamentary Committee, 1912-21, Chairman since 1921.) (Lect. on Ment. Dis., St. Mary's Hosp.)
- 1900. Cole, Sydney John, M.A., M.D., B.Ch.Oxon., Medical Superintendent, Wilts County Asylum, Devizes.
- 1906. Collier, Walter Edgar, M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer, Kent County Mental Hospital, Barming Heath, Maidstone.
- 1903. Collins, Michael Abdy, O.B.E., M.D., B.S., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Kent County Mental Hospital, Chartham Downs. (Hon. General Secretary, 1912-18.)
- 1910. Conlon, Thomas Peter, L.R.C.P.&S.Irel., Resident Medical Superintendent, District Asylum, Monaghan.
- 1921. Connell, Ernest Henry, M.B., Ch.B.Edin., D.P.M., 7, Greenhill Gardens, Edinburgh.
- 1920. Connell, Oliver George, M.C., L.R.C.P.&S.Irel., Medical Superintendent, Norfolk County Mental Hospital, Thorpe, Norwich.
- 1914. Connolly, Victor Lindley, M.C., M.B., B.Ch.Belf., D.P.M., Deputy Medical Superintendent, West Park Mental Hospital, Epsom.
- 1910. Coombes, Percival Charles, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Surrey County Mental Hospital, Netherne, near Coulsdon.
- 1921. Cooper, Alexander, M.A., M.B., Ch.B.Aberd., Park View, Cults, Aberdeenshire.
- 1903. Cormac, Harry Dove, M.B., M.S.Madras, D.P.M., Medical Superintendent, Cheshire Mental Hospital, Parkside House, Macclesfield.
- 1891. Corner, Harry, M.D.Lond., M.R.C.S., L.R.C.P.Lond., M.P.C., Brook House, Southgate, N. 14.
- 1917. Costello, Christopher, M.B., B.Ch.N.U.I., Assistant Medical Officer, Graingegorman Mental Hospital, Donabate, co. Dublin.
- 1897. Cotton, William, M.A., M.D.Edin., D.P.H., M.P.C., 231, Gloucester Road, Bishopston, Bristol.
- 1910. Coupland, William Henry, L.R.C.S.&P.Edin., L.R.F.P.S.Glasg., Medical Superintendent, Royal Albert Institution; Albert House, Haverbreaks, Lancaster.
- 1913. Court, Edward Percy, M.R.C.S., L.R.C.P.Lond., Deputy Medical Superintendent, Derby Borough Mental Hospital, Rowditch.
- 1911. Cox, Donald Maxwell, M.R.C.S., L.R.C.P.Lond., County and City Mental Hospital, Burghill, Hereford.
- 1918. Cox, The Rt. Hon. Michael Francis, LL.D., M.D.R.U.I., F.R.C.P.Irel.,
  Physician, St. Vincent's Hospital, Dublin; 26, Merrion Square,
  Dublin.
- 1924. Craig, Alexander, M.B., Ch.B.Aberd., Assistant Physician, Royal Mental Hospital, Aberdeen.
- 1893. Craig, Sir Maurice, C.B.E., M.A., M.D., B.Ch.Camb., F.R.C.P.Lond., M.P.C., 87, Harley Street, London, W. 1. (Hon. Secretary of Educational Committee, 1905-8; Chairman of Educational Committee, 1912-19.) (Lect. on Psychol. Med., Guy's Hosp.)
- mittee, 1912-19.) (Lect. on Psychol. Med., Guy's Hosp.)
  1924. Craig, Roy Neville, M.D.Durh., M.R.C.S., L.R.C.P.Lond., D.P.M.,
  Heath Court, Barton Road, Torquay.

- 1023. Craigie, James, M.B., Ch.B.St. And., Assistant Medical Officer, Murray Royal, Perth.
- Creak, Eleanor Mildred, M.B., B.S., M.R.C.S., L.R.C.P.Lond., Assis-1925. tant Physician, The Retreat, York.
- Cribb, Harry Gifford, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, 1897. Durham County Mental Hospital, Winterton, Ferryhill.
- Crichlow, Charles Adolphus, M.B., Ch.B.Glasg., Senior Assistant Medical IQII. Officer, Bangour Village, West Lothian. Crocket, James, M.D., F.R.C.P.Edin., D.P.H., Medical Superintendent,
- 1917. Colony of Mercy for Epileptics, Consumption Sanatoria of Scotland, Craigielea, Bridge of Weir.
- Crosthwaite, Frederick Douglas, M.B., Ch.B.Edin., D.P.H., Mental 1915.
- Hospital, Queenstown, Cape Province, South Africa.

  Crow, Norah Annie, M.A.Edin., M.D., B.S.Lond., "Kingsclere,"
  Harrington Road, Brighton. 1923.
- Cuthbert, James Harvey, M.B., Ch.B.Edin., D.P.M., Senior Assistant 1010. Medical Officer, West Ham Mental Hospital; 63, Eastwood Road, Goodmayes, Essex.
- Daniel, Alfred Wilson, B.A., M.D., B.Ch.Camb., M.R.C.S., L.R.C.P.Lond., 1907. Medical Superintendent, Hanwell Mental Hospital, Southall, Middlesex. (Secretary of Educational Committee since 1920.)
- Davidson, Andrew, M.D., C.M.Aberd., M.P.C., 221, Macquarie Street, 1896. Sydney, N.S.W. (Lect. on Psychol. Med., University of Sydney.)
- Davidson, Thomas Wishart, M.B., Ch.B.Glasg., D.P.M., Assistant 1925. Medical Officer and Pathologist, City Mental Hospital, Humberstone, Leicester.
- e, Thomas Macnaughton, M.C., M.D., Ch.B.Edin., D.P.M., Barrister-at-Law, Assistant Physician, Royal Edinburgh Hospital; 1922. Davie, Thomas 2, Morningside Terrace, Edinburgh.
- Davies-Jones, Charles William Saunderson, M.B., Ch.B.Edin., First Assistant Medical Officer, Ashhurst Hospital, Littlemore, Oxford.
- Dawson, William Siegfried, M.A., M.D., B.Ch.Oxon., M.R.C.S., M.R.C.P. Lond., D.P.M., c/o Phipps Psychiatric Clinic, Johns Hopkins 1020. Hospital, Baltimore, U.S.A.
- Dearden, Harold, B.A.Camb., M.R.C.S., L.R.C.P.Lond., 43, Curzon 1922.
- Street, Mayfair, W. 1.

  Delany, J. J., L.R.C.P.&S.Irel., Assistant Medical Officer, Ballinasloe 1925. District Mental Hospital, Ireland.
- De Steiger, Adele Isabella, M.D.Lond., Second Assistant Medical IQOI. Officer, Essex County Mental Hospital, Brentwood; Dormansland, Lingfield, Surrey.
- Devine, Henry, O.B.E., M.D., B.S., F.R.C.P.Lond., M.R.C.S.Eng., 1905. M.P.C., Medical Superintendent, Borough Mental Hospital, Milton, Portsmouth. (Co-Editor of the Journal since 1920; Assistant Editor, 1916-20.)
- 1904. Devon, James, F.R.F.P.S.Glasg., L.R.C.P.&S.Edin., Prison Commissioner for Scotland, 11, Rutland Square, Edinburgh.
- Devon, Martha Davidson, L.R.C.P. & S.Edin., L.R.F.P.S.Glasg., Assis-1924. tant Medical Officer, Stirling District Mental Hospital, Larbert.
- Dhunjibhoy, Jal Edulji, M.B., B.S.Bombay, Capt. I.M.S., Medical 1925. Superintendent, The Indian Mental Hospital, Tanke Ranchi, Bihar and Orissa, India; c/o Lloyds Bank, Cox's Branch, Bombay.
- Dick, Alexander, M.C., M.B., Ch.B.Glasg., Assistant Medical Officer. 1921. Glasgow District Mental Hospital, Woodilee, Lenzie.
- Dickson, James, M.C., M.B., Ch.B.Edin., Browne House, Hamsal Road. 1922. Southend-on-Sea.
- Dillon, Frederick, M.D., Ch.B.Edin., Medical Superintendent, North-1915. umberland House Mental Hospital, Finsbury Park, N. 4; 72, Wimpole Street, London, W. 1.
  - Dillon, Kathleen, L.R.C.P.&S.Irel., Assistant Medical Officer, District Asylum, Mullingar.

- 1905. Dixon, J. Francis, M.A., M.D., B.Ch.Dubl., M.P.C., Medical Superintendent, City Mental Hospital, Humberstone, Leicester.
- 1879. Dodds, William John, D.Sc., M.D., C.M.Edin., 19, Marina Road, Prestwick, Ayrshire.
- 1892. Donelan, John O'Conor, L.R.C.P.&S.Irel., M.P.C., Med. Supt., Grangegorman District Mental Hospital; St. Dymphna's, North Circular Road, Dublin. (Lect. on Ment. Dis., Univ. of Dublin.)
- Douglas, Dorothy Herbert, L.R.C.P.&S.Irel., Pathologist, Farnham House, Finglas; Merrion House, Lower Fitzwilliam Street, Dublin.
- 1910. Downey, Michael Henry, D.S.O., M.B., Ch.B.Melb., L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Medical Superintendent, Parkside Asylum, Adelaide, South Australia.
- Drake-Brockman, Henry George, M.R.C.S., L.R.C.P.Lond., Deputy Medical Superintendent, City Mental Hospital, Middlesbrough.
- 1923. Draper, Arthur Phillip, M.C., M.D., B.Ch.Dubl., Capt. R.A.M.C., Mental Specialist, Southern Command, India; c/o Glyn Mills & Co., 3, Whitehall Place, S.W.1.
- 1916. Drummond, William Blackley, M.D., C.M., F.R.C.P.Edin., Medical Superintendent, Baldovan Institution, Dundee.
- Drury, Kenneth Kirkpatrick, M.C., B.A., M.D., B.Ch.Dubl., Senior Assistant Medical Officer, County Mental Hospital, Stafford; "Swift Brook," Corporation Street, Stafford.
- 1907. Dryden, Arthur Mitchell, M.B., Ch.B.Edin., Medical Superintendent, Glasgow District Mental Hospital, Gartloch, Gartcosh.
- 1902. Dudgeon, Herbert Wm., M.D., B.S.Durh., M.R.C.S., L.R.C.P.Lond.,
- Director of Lunacy, Ministry of Interior, Abbassia, Egypt.

  Dudley, Francis, L.R.C.P.&S.Irel., Medical Superintendent, Cornwall 1899. County Asylum, Bodmin.
- Duncan, Williams Arthur, M.B., Ch.B.Edin., Assistant Medical Officer, East Sussex County Mental Hospital, Hellingly, Sussex.
- Dunne, John, M.B., B.Ch.R.U.I., Assistant Medical Officer, Grange-gorman District Mental Hospital, Dublin. 1923.
- 1922. Dunscombe, Nicholas Dunscombe, M.A., M.B., B.Ch.Cantab., L.M.S.S.A., D.P.H.Lond., F.R.I.P.H., Barrister-at-Law, 14, The Paragon, Bath. 1903.
- Dunston, John Thomas, M.D., B.S.Lond., Commissioner of Mental Disorders and Defective Persons, South Africa, and Medical Superintendent, West Koppies Mental Hospital, Pretoria, South Africa.
- 1923. Dwyer, Patrick, M.B., B.Ch.R.U.I., Assistant Medical Officer, Portrane District Mental Hospital, Dublin.
- 1906. Eager, Richard, O.B.E., M.D., Ch.B.Aberd., M.P.C., Medical Superintendent, Devon County Mental Hospital, Exminster.
- 1891. Earls, James Henry, M.D., M.Ch.R.U.I., L.S.A.Lond., D.P.H., M.P.C., Barrister-at-Law, Fenstanton, Christchurch Road, Streatham Hill, London, S.W. 2.
- 1921. East, Guy Roland, M.D., B.S., B.Hy.Durh., D.P.H., Medical Superintendent, Northumberland County Mental Hospital, Collingwood, Morpeth.
- 1907. Bast, Wm. Norwood, M.D., M.R.C.S., L.R.C.P.Lond., M.P.C., Medical Inspector, H.M. Prisons (England and Wales), Prison Commission, Home Office, Whitehall, S.W. 1.
- Easterbrook, Charles C., M.A., M.D., F.R.C.P.Edin., M.P.C., J.P.,
  Physician Superintendent, Crichton Royal Institution, Dumfries.
- Eaton, Thomas Tighe Wandesforde, L.R.C.P.&S.Irel., Assistant Medical
- Officer, St. Patrick's Hospital (Lucan Branch), Dublin. 1924. Eddison, Herbert Wilfred, M.A.Camb., M.R.C.S., L.R.C.P.Lond., D.P.M., Assistant Medical Officer, London County Mental Hospital,
- Banstead, Surrey. Banstead, Surrey.

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  Banstead, Sur
- tendent, West Kiding Asylum, McHiston, M. R.C.P. Lond., "Cherchefelle," Reigate, Surrey. tendent, West Riding Asylum, Menston, nr. Leeds.

1924. Edwards, Thomas Lloyd, L.R.C.P.&S.Edin., D.P.M., Assistant Medical Officer, County Mental Hospital, Bridgend, Glamorgan.

1919. Eggleston, Henry, M.B., B.S.Durh., M.P.C., The Mental Hospital, Pietermaritzburg, Natal, South Africa; c/o Standard Bank S.A., Adderley Street, Cape Town.

1901. Elgee, Samuel Charles, O.B.E., L.R.C.P.&S.Irel., Medical Superintendent, Cane Hill Mental Hospital, Purley, Surrey.

1889. Elkins, Frank Ashby, M.D., C.M.Edin., M.P.C., Waingroves, 103, Rickmansworth Road, Watford, Herts.

1912. Ellerton, John Frederick Heise, M.D.Brux., M.R.C.S.Eng., L.R.C.P. Edin., Rotherwood, Learnington Spa.

1908. Ellison, Arthur, M.R.C.S., L.R.C.P.Lond., 10, Sholebroke Avenue, Leeds.

1901. Erskine, Wm. J. Adams, M.D., C.M.Edin., Medical Superintendent, County Mental Hospital, Whitecroft, Newport, I. of W.

1895. Eurich, Frederick Wilhelm, M.D., C.M.Edin., Lanshawe Cottage, Ilkley, Yorks. (Professor of Forensic Medicine, University of Leeds.)

1894. Eustace, Henry Marcus, B.A., M.D., B.Ch.Dubl., M.P.C., Medical Superintendent, Hampstead and Highfield Private Asylum, Glasnevin, Dublin.

1909. Eustace, William Neilson, L.R.C.S.&P.Irel., Resident Medical Officer, Glasnevin, Dublin.

1918. Evans, A. Edward, M.B., B.S.Lond., M.R.C.S., L.R.C.P.Lond., D.P.H. Liverp., Inspector, Board of Control, 3, Rotherwick Court, Golders Green, London, N.W. 4.

1891. Ewan, John Alfred, M.A.St.And., M.D., C.M.Edin., M.P.C., Greylees, Sleaford, Lincs.

1914. Ewing, Cecil Wilmot, L.R.C.P.&S.Irel., D.P.M., Deputy Medical Superintendent, Storthes Hall Asylum, Kirkburton, nr. Huddersfield.

1925. Fairweather, Anne, M.B., B.S.Durh., D.P.M., Assistant Medical Officer, Hollymoor Mental Hospital, Northfield, Birmingham.

1894. Farquharson, William F., M.D., C.M.Edin., M.P.C., Medical Superintendent, Cumberland and Westmorland Mental Hospital, Garlands, Carlisle.

1921. Farran-Ridge, Clive, M.B., Ch.M.Syd., D.P.M., Assistant Medical Officer, County Mental Hospital, Stafford.

1907. Farries, John Stothart, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., The Cottage, Hethersgill, Carlisle.

1903. Fennell, Charles Henry, M.A., M.D.Oxon., M.R.C.P.Lond., 27, Cadogan Court, S.W. 3.

1908. Fenton, Henry Felix, M.B., Ch.B.Edin., Medical Superintendent, Worcester County and City Mental Hospital, Powick.

1906. Fielding, Saville James, M.B., B.S.Durh., Medical Superintendent, Bethel Hospital, Norwich.

1889. Finlay, David, M.D., C.M.Glasg., Medical Superintendent, Glamorgan County Asylum, Bridgend.

1906. Firth, Arthur Harcus, M.A., M.D., B.Ch.Edin., Deputy Medical Superintendent, Worcestershire County Mental Hospital, Barnesley Hall, Bromsgrove.

1903. Fitzgerald, Alexis, L.R.C.P.&S.Irel., Medical Superintendent, District Mental Hospital, Waterford.

 Fitzgerald, James Francis, L.R.C.P.&S.Irel., Assistant Medical Officer, District Mental Hospital, Clonmel, Ireland.

1923. Fitzgerald, John Joseph, M.D.Durh., M.D.Brux., L.R.C.P.Irel., L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., L.A.H.Dubl., Assistant Physician, Cork Mental Hospital; Mile House, Cork.

1921. Fleming, Gerald William Thomas Hunter, M.R.C.S., L.R.C.P.Lond., D.P.M., Deputy Medical Superintendent, Sunderland Mental Hospital, Ryhope, Sunderland.

1904. Fleming, Wilfrid Louis Remi, M.R.C.S., L.R.C.P.Lond., J.P., Suffolk House, Pirbright, Surrey.

- 1925. Flind, James, M.B., Ch.B.Glasg., Senior Assistant Medical Officer, Peckham House, S.E. 15.
- 1925. Forbes, Hugh Scott, M.R.C.S.Eng., L.R.C.P.Lond., Assistant Medical Officer, Colney Hatch Mental Hospital, New Southgate, N. 11.
- Forrester, Archibald Thomas William, M.D., B.S., M.R.C.S., L.R.C.P.
  Lond., Medical Superintendent, Warwickshire County Mental
  Hospital, Hatton.
- 1916. Forsyth, Charles Wesley, M.D., M.R.C.S., L.R.C.P.Lond., Deputy Medical Superintendent, Hollymoor Mental Hospital, Northfield, Birmingham.
- 1924. Forsythe, Thomas Ronald, M.B., Ch.B.Sheff., D.P.M., Assistant Medical Officer, Kent County Mental Hospital, Maidstone.
- 1913. Forward, Ernest Lionel, M.R.C.S., L.R.C.P.Lond., D.C.M.S. Ministry of Pensions, 1, Sanctuary Buildings, London, S.W. 1.
- 1913. Fothergill, Claude Francis, B.A., M.B., B.Ch.Camb., M.R.C.S., L.R.C.P. Lond.; "Hensol," Chorley Wood, Herts; and 150, Harley Street, W. 1.
- 1925. Fox, Francis Elliot, M.R.C.S., L.R.C.P.Lond., Peckham House, Peckham Road, S.E. 15.
- 1920. Fox, J. Tylor, M.A., M.D., B.Ch.Camb., M.R.C.S., L.R.C.P.Lond., D.P.M., Medical Superintendent, Lingfield Epileptic Colony; The Homestead, Lingfield, Surrey.
- 1923. Franklin, Marjorie Ellen, M.B., B.S., M.R.C.S., L.R.C.P.Lond., D.P.M., Medical Officer, Tavistock Clinic for Functional Nerve Cases; 28, Wimpole Street, Cavendish Square, London, W. 1.
- 1881. Fraser, Donald, M.D., C.M.Glasg., F.R.F.P.S.Glasg., Connel Head, Dyce, nr. Aberdeen.
- 1919. Fraser, Kate, B.Sc., M.D., Ch.B.Glasg., D.P.H., Deputy Commissioner, General Board of Control, Scotland; 25, Palmerston Place, Edinburgh.
- 1921. Fuller, Hugh Hercus Cavendish, M.B., Ch.B.Edin., "Oakdale," Priory Road, Great Malvern.
- 1902. Fuller, Lawrence Otway, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Three Counties' Mental Hospital, Arlesey, Beds.
- 1906. Gane, Edward Palmer Steward, M.D.Durh., M.R.C.S., L.R.C.P.Lond.,
  Assistant Medical Superintendent, The Coppice, Nottingham.
- 1912. Garry, John William, M.B., B.Ch.N.U.I., Assistant Medical Superintendent, Clare County Mental Hospital, Ennis, Ireland.
- 1922. Gasperine, John Jones, M.R.C.S., L.R.C.P.Lond., D.P.H., D.P.M.,
- Medical Superintendent, Rendlesham Hall, Woodbridge, Suffolk.

  1912. Gavin, Lawrence, M.B., Ch.B., L.R.C.P.&S.Edin., L.R.F.P.S.Glasg.,
  Medical Superintendent, Mullingar District Asylum, Ireland.
- nedical superintendent, mulingar District Asylum, Ireland.

  1896. Geddes, John William, M.B., C.M.Edin., Medical Superintendent,
  Borough Mental Hospital, Middlesbrough, Yorks.
- 1923. Gibson, George Herbert Rae, D.S.O., M.D., F.R.C.P.Edin., L.C.P.S.
  Brit. Columbia, Deputy Commissioner, General Board of Control,
  Scotland; 23, Cluny Terrace, Edinburgh.
- 1919. Gifford, John, B.A.Cape, M.B., Ch.B.Edin., D.P.M., Senior Assistant Medical Officer, Lancashire County Mental Hospital, Rainhill.
- 1921. Gilfillan, John Aitken, M.D., Ch.B., F.R.F.P.S.Glasg., D.P.M., Deputy
  Medical Superintendent, North Riding Mental Hospital, Clifton,
  Yorks
- 1899. Gilfillan, Samuel James, O.B.E., M.A., M.B., C.M.Edin., Medical Superintendent, Colney Hatch Mental Hospital, New Southgate, London, N. 11.
- 1923. Gillespie, Isabella Annie, M.B., B.Ch.Edin., Junior Assistant Medical Officer, County Mental Hospital, Upton, Chester.
- 1921. Gillespie, Robert Dick, M.D., Ch.B.Glasg., D.P.M., Resident Medical Officer, Cassel Hospital, Penshurst, Kent.
- 1920. Gillis, Kurt, M.B., Ch.B.Edin., Assistant Physician, Alexandra Hospital, Maitland, S. Africa.

- 1897. Gilmour, John Rutherford, M.B., C.M., F.R.C.P.Edin., M.P.C., Medical Superintendent, West Riding Asylum, Scalebor Park, Burley-in-Wharfedale, Yorks. (Hon. Sec. N. and M. Division from 1920.)
- Gilmour, Richard Withers, M.B., B.S.Durh., M.R.C.S., L.R.C.P.Lond., 1906. Physician-in-Charge, St. Luke's Hospital: 10, Nottingham Place. W. 1. (Lect. on Psychiatry, Middlesex Hospital, London.)
- Frederick Lucien, M.A., M.B., B.Ch.Oxon., F.R.C.P.Lond., 1923. Golla, Director of the Laboratory and Pathologist to the London County Mental Hospitals, The Maudsley Hospital, Denmark Hill, S.E. 5; The Dene, Sunninghill.
- Good, Thomas Saxty, O.B.E., M.A.Oxon., M.R.C.S., L.R.C.P.Lond., 1897. Medical Superintendent, Ashhurst Mental Hospital, Littlemore,
- Goodall, Edwin, C.B.E., M.D., B.S., F.R.C.P.Lond., M.P.C., Medical 1889. Superintendent, City Mental Hospital, Cardiff. (PRESIDENT, 1923-24.) (Lect. on Ment. Dis., Welsh Nat. School of Medicine, Cardiff.)
- Gordon, George, M.B., Ch.B.Glasg., Deputy Medical Superintendent, 1920. Ministry of Pensions Hospital, Saltash, Plymouth.
- Gordon, James Leslie, M.D., C.M.Aberd., Medical Superintendent, 1899. Caterham Mental Hospital; Karaissi, Caterham, Surrey.
- Gostwyck, Cecil Hubert Gostwyck, M.B., Ch.B., F.R.C.P.Edin., M.P.C., IQOI. Dipl. Psych., Assistant Medical Officer, Rampton State Institution, Retford, Notts.
- Graham, Norman Bell, M.C., B.A.R.U.I., M.B., B.Ch.Belf., D.P.M., Senior Assistant Medical Officer, Purdysburn Villa Colony, Belfast. 1914.
- Graham, Samuel, L.R.C.P.Lond., Resident Medical Superintendent, 1894. District Asylum, Antrim.
- Graham, Samuel John, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Resident 1918. Medical Superintendent, Villa Colony Asylum, Purdysburn, Belfast.
- 1908. Graham, William Shepherd, M.B., B.Ch.R.U.I., Senior Assistant Medical Officer, Somerset and Bath Asylum, Cotford, near Taunton.
- Grant, Alastair Robertson, M.B., Ch.B. Aberd., Deputy Medical Super-1921. intendent, County Mental Hospital, Whittingham, Preston.
- Grant, John King, M.B., Ch.B.Aberd., Assistant Physician, Aberdeen 1925. Royal Mental Hospital, Aberdeen.
- Graves, Thomas Chivers, B.Sc., M.D., B.S.Lond., F.R.C.S.Eng., Medical 1915. Superintendent, Rubery Hill Mental Hospital, nr. Birmingham.
- Gray, Cyril, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Senior Assistant Medical Officer, Newcastle City Mental Hospital, Gosforth. 1916.
- Gray, Joseph Anthony Wenceslaus Pereira, M.D.Brux., M.R.C.S., L.R.C.P.Lond., Visitor of Licensed Houses under Lunacy and 1921. Mental Deficiency Acts; 3, Northernhay Place, Exeter. Greene, Thomas Adrian, L.R.C.S.&P.Irel., J.P., Medical Superintendent,
- 1909. District Asylum, Carlow.
- Gregorson, Albert William, M.D., Ch.B., F.R.F.P.S.Glasg., Assistant 1922. Physician and Deputy Superintendent, North Middlesex Hospital, Silver Street, Upper Edmonton, N. 18; 9, Aubrey Crescent, Largs, Ayrshire.
- Grills, Galbraith Hamilton, M.D., B.Ch., R.U.I.D.M.D., M.P.C., Medical IQOI. Superintendent, County Mental Hospital, Upton, Chester.
- 1916. Grimbly, Alan Francis, M.A., M.D., B.Ch.Dubl., D.P.M., Assistant Medical Officer, Essex County Mental Hospital, Colchester.
- Grossman, Simon, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, 1923. Cardiff City Mental Hospital, Whitchurch, Glam.
- Guppy, Francis Henry, M.C., M.R.C.S., L.R.C.P.Lond., D.P.M., Deputy 1922. Medical Superintendent, Brighton County Mental Hospital, Haywards Heath, Sussex.
- 1894 Halsted, Harold Cecil, M.D.Durh., M.R.C.S., L.R.C.P., L.S.A.Lond., Manor Road, Selsey, Sussex.

- Hancock, Allen Coulter, M.C., M.R.C.S., L.R.C.P.Lond., D.P.H., D.P.M., 1020. Assistant Medical Officer, London County Mental Hospital, Bexley, Kent.
- Hardcastle, Douglas Nöel, M.R.C.S., L.R.C.P.Lond., D.P.M., Physician, 1923. Tavistock Clinic for Functional Nervous Disease; 18, Whitcomb Street, Pall Mall East, S.W. 1.
- 1920. Harding, Edward Palmer, L.R.C.P.&S.Irel., Deputy Medical Superintendent, East Riding Mental Hospital, Beverley, Yorks.
- Harper, Raymond Sydney, M.R.C.S., L.R.C.P.Lond., F.R.M.S., Medical Superintendent, Psycho-Therapeutic Clinic, Ministry of 1920. Pensions, Brighton; 36, First Avenue, Hove, Sussex.
- Harper-Smith, George Hastie, M.A., M.D.Camb., M.R.C.S., L.R.C.P. 1904. Lond., Medical Superintendent, Brighton County Mental Hospital, Haywards Heath; Galagate, Haywards Heath, Sussex.
- Harris, John Stuart, M.D., Ch.B. Edin., Assistant Medical Officer, 1924. West Park Mental Hospital, Epsom, Surrey.
- Harris-Liston, Llewellyn, M.D.Brux., M.R.C.S., L.R.C.P., L.S.A.Lond., 1898. F.R.I.P.H., Middleton Hall, Middleton St. George, co. Durham., Bernard, M.D.Lond., F.R.C.P.Lond., M.R.C.S., 94, Harley
- 1905. Hart, Street, London, W. 1. (Lect. on Ment. Dis., Univ. Coll. Hosp.)
  Harvey, Bagenal Crosbie, L.R.C.P.&S.Edin., L.A.H.Dubl., Resident
- 1886. Medical Superintendent, District Asylum, Clonmel, Ireland.
- Haslett, William John Handfield, M.R.C.S., L.R.C.P.Lond., M.P.C., J.P., Resident Medical Superintendent, Halliford House, Sunbury-1892. on-Thames.
- Hayes, Edmund Duncan Tranchell, B.A., M.D., B.Ch.Dubl., D.P.M., 1923. Assistant Medical Officer, Croydon Mental Hospital, Warlingham Park, Upper Warlingham.
- Hayes, Henry Douglas, M.B., Ch.B.Edin., D.P.M., Assistant Medical 1924. Officer, Hanwell Mental Hospital, Southall.
- Haynes, Horace Eyres, V.D., M.R.C.S., L.S.A.Lond., J.P., Littleton 1900. Hall, Brentwood, Essex.
- Haynes, Horace Guy Lankester, M.R.C.S., L.R.C.P.Lond., Littleton Hall, Brentwood, Essex. 1920.
- Henderson, Cyril John, M.B.Durh., F.R.I.P.H., Assistant Medical 1920. Officer, The Royal Albert Institution, Lancaster.
- Henderson, David Kennedy, M.D., Ch.B.Edin., F.R.F.P.S.Glasg., 1916. Physician Superintendent, Royal Mental Hospital, Gartnavel; 17, Whittingham Drive, Kelvinside, Glasgow. (Lect. on Psychological Medicine, Univ. of Glasgow.)
- Henderson, George, M.A., M.B., Ch.B.Edin., 25, Commercial Road, 1905. Peckham, London, S.E. 15.
- Henderson, Norman Keane, B.A., LL.B.Camb., M.B., Ch.B.Edin., 1923. D.P.H., Assistant Medical Officer, Bracebridge Mental Hospital, Lincoln.
- Hennessy, James Alphonsus, M.B., Ch.B.Edin., Assistant Medical Officer, County Mental Hospital, Mickleover, Derby. 1923.
- Hensman, Henry Saumarez, L.M. &S. Madras, M.R.C.S., L.R.C.P.Lond., 1024. M.P.C., Medical Superintendent, Government Mental Hospital, Kilpauk, Madras.
- Herbert, J. E., M.B., B.Ch.R.U.I., Senior Assistant Medical Officer, 1924. District Mental Hospital, Omagh, Ireland.
- Heron, John, M.B., Ch.B.Edin., Assistant Medical Officer, Kent County 1925. Mental Hospital, Maidstone.
- Hewson, Robert W. Dale, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Senior 1014. Medical Officer, Ministry of Pensions Hospital, Kirkburton.
- Higson, William Davies, M.B., Ch.B.Liverp., D.P.H., Medical Officer,
   H.M. Prison; "Eversley," Boxley Road, Maidstone, Kent.
   Hollander, Bernard, M.D.Freib., M.R.C.S., L.R.C.P.Lond., 57, Wimpole 1912.
- 1900. Street, London, W. 1.
- 1925. Home, Bruce Fordyce, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Northumberland House, Green Lanes, N. 4.

- Honan, Bernard Francis, L.R.C.P.&S.Irel., Assistant Medical Officer, 1925. Down District Mental Hospital, Downpatrick.
- Hooper, Reginald Arthur, M.B., B.S.Durh., Medical Superintendent,
   City Mental Hospital, Fulford, Yorks.
   Hopkins, Charles Leighton, B.A., M.B., B.Ch.Camb., St. Matthew's 1920.
- 1903. Gardens, St. Leonards-on-Sea.
- 1914. Horne, Laura Katherine, M.B., Ch.B.Edin., Poole, Dorset.
- Horton, Wilfred Winnall, M.D., C.M.Edin., Medical Superintendent, 1918. Wye House, Buxton.
- Hotchkis, Robert Dunmore, M.A.Glasg., M.D.Durh., M.B., B.S., M.R.C.S., L.R.C.P.Lond., M.P.C., Medical Superintendent, 1894. Renfrew District Asylum, Dykebar, Paisley.
- 1912. Hughes, Frank Percival, M.B., B.S., M.R.C.S., L.R.C.P.Lond., The Grove, Pinner, Middlesex.
- Hughes, Percy T., M.B., C.M.Edin., D.P.H., Medical Superintendent, 1900. Worcestershire County Mental Hospital, Barnesley Hall, Bromsgrove. (Lect. on Ment. Dis., Univ. of Birm.)
- Hughes, William Stanley, M.B., B.S., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Salop County Mental Hospital, Bicton 1004. Heath, Shrewsbury.
- Hunter, David, M.A., M.B., B.Ch.Camb., L.S.A.Lond., Medical Super-1897. intendent, The Coppice, Nottingham. (Secretary for S.E Division, 1910-1913.)
- Hunter, George Yeates Cobb, M.R.C.S., L.R.C.P.Lond., M.P.C., 1912. I.M.S., c/o Messrs. Grindlay & Co., 54, Parliament Street, London, S.W. 1.
- Hunter, Percy Douglas, M.R.C.S., L.R.C.P.Lond., D.P.M., Deputy 1904. Medical Superintendent, Three Counties Mental Hospital, Arlesey, Beds.
- Hutton, Isabel Emslie, M.D., Ch.B.Edin., Research Worker, Maudsley Hospital, Denmark Hill, S.E. 5; 6, Montagu Place, London, W. 1.
- 1888. Hyslop, Theo. Bulkeley, M.D., C.M., M.R.C.P., L.R.C.S., F.R.S.Edin., M.P.C., 5, Portland Place, London, W. 1.
- Ingall, Frank Ernest, F.R.C.S.Eng., L.R.C.P.Lond., D.P.H., Public Health Offices, Clarence Street, Southend-on-Sea.
- 1908. Inglis, James Pringle Park, M.D., Ch.B.Edin., Senior Assistant Medical Officer, Leavesden Mental Hospital, King's Langley, Herts.
- Irwin, Peter Joseph, L.R.C.P.&S.Irel., Medical Superintendent, District 1906. Asylum, Limerick.
- Jack, Victor William, M.B., Ch.B.Edin., Senior Assistant Medical 1023. Officer, Stirling District Mental Hospital, Larbert.
- Jackson, John Luke, M.B., B.Ch.Belf., Medical Superintendent, Hants 1020. County Mental Hospital, Knowle, Fareham.
- James, George William Blomfield, M.C., M.D., B.S., L.S.A.Lond., 1914. D.P.M., Resident Medical Officer, Moorcroft House, Hillingdon, Uxbridge.
- Jardine, Maurice Kirkpatrick, M.B., Ch.B.Edin., The Infirmary, 1021. Shirley Warren, Southampton.
- Jarrett, R. F., L.M.S.S.A.Lond., F.R.F.P.S.Glasg., H.M. Borstel 1922. Institution, Feltham, Middlesex.
- Jeffrey, Geo. Rutherford, M.D., Ch.B.Glasg., F.R.C.P.Edin., M.P.C.. 1908. F.R.S.Edin., Medical Superintendent, Bootham Park, York.
- Jenkins, John Alexander, M.B., Ch.B.Glasg., Assistant Medical Officer. 1925. Argyll and Bute District Asylum, Lochgilphead.
- 1924. Jenkins, Reginald Edward, L.M.S.S.A.Lond., Assistant Medical Officer. Carnarvon Hotel, 5, Hanger Lane, Ealing Common, London, W.
- Johnston, Gerald Herbert, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Brooke 1893. House, Upper Clapton, London, E. 5.
- Johnston, Thomas Leonard, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., 1905. Heckington Hall, Sleaford, Lines.

- 1912. Johnstone, Emma May, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., D.P.M., M.P.C., Doune Cottage, Virginia Water, Surrey.
- Johnstone, J. Carlyle, M.D., C.M.Glasg., Scottish Conservative Club, 1878. Edinburgh.
- Johnstone, Thomas, M.D., C.M.Edin., M.R.C.P.Lond., 6, Victoria 1903. Avenue, Harrogate.
- Joyner, Charles, M.A., M.B., Ch.B.Glasg., The Hollies, Nechells Park 1924. Road, Birmingham.
- Kay, Walter Smith, M.D., C.M.Edin., M.R.C.S.Eng., Granby Hotel, 1879. Harrogate.
- John, C.B.E., M.D., C.M.Glasg., F.R.C.P.Edin., Medical perintendent, Bangour Village, Uphall, Linlithgowshire. Keay, 1886. Superintendent, Bangour Village, Uphall, Linlithgowshire. (PRESIDENT 1918.) (Lect. on Ment. Dis., Roy. Colls., Edin.)
  Keith, William Brooks, M.C., M.D., Ch.B.Aberd., M.P.C., Medical
- 1909. Superintendent, St. Audry's Hospital, Melton; Redwald House, Melton, Suffolk. (Secretary Parliamentary Committee from 1921.)
- Kelly, Daniel Lane, L.R.C.P.&S.Irel., Inspector of Lunatics and Senior 1924. Medical Inspector, Local Government Department; Ardmore, Killiney, co. Dublin.
- Keene, George Henry, M.D., B.Ch.Dubl., Medical Superintendent, 1907. Stewart Institution, Palmerston; 14, Palmerston Park, Dublin.
- Kennedy, Hugh T. J., L.R.C.P.&S.Irel., Medical Superintendent, Ennis-1899. corthy District Asylum, Wexford.
- Kerr, Hugh, M.A., M.D., C.M.Glasg., Medical Superintendent, Bucks 1897. County Mental Hospital, Stone, Aylesbury, Bucks.
- Kerr, Neil Thomson, M.B., C.M.Edin., J.P., Medical Superintendent, 1902. Lanark District Asylum, Hartwood, Lanarkshire.
- Key, Gordon James, M.B., Ch.B.Aberd., Senior Assistant Physician, Valkenburg Mental Hospital, Observatory, Cape Town, South 1920. Africa.
- el Kholy, Mohamed Kamel, M.R.C.S., L.R.C.P.Lond., D.P.M., Senior 1923. Medical Officer, Abbassia Mental Hospital, Cairo, Egypt.
- Kidd, Harold Andrew, C.B.E., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Graylingwell Mental Hospital, Chichester. 1897.
- Kiddle, Frederick, C.M.G., B.A., M.B., B.Ch.Dubl., Hillcot, Beverley 1923. Street, Colchester.
- Kimber, William Joseph Teil, M.R.C.S., L.R.C.P.Lond., D.P.M., Senior 1920. Assistant Medical Officer, Herts County Mental Hospital, Hill End, St. Albans.
- King, Frank Raymond, B.A.Camb., M.R.C.S., L.R.C.P.Lond., Medical 1903. Superintendent, Peckham House, Peckham, London, S.E.
- King, Isabel Falconer, M.B., Ch.B., L.R.C.P.&S.Edin., L.R.F.P.S. Glasg., D.P.M., Senior Assistant Medical Officer, Rubery Hill 1923. Mental Hospital, Birmingham.
- King-Turner, Arthur Charles, M.B., C.M. Edin., Medical Superintendent, 1902. The Retreat, Fairford, Gloucestershire.
- Kirwan, Richard R., M.B., B.Ch.R.U.I., Assistant Medical Officer, West 1915. Riding Asylum, Menston, Leeds.
- Knight, Mary Reid, M.A., M.B., Ch.B.Glasg., Assistant Medical Officer, 1919. Paisley District Asylum, Riccartsbar, Paisley, N.B.
- 1898.
- Labey, Julius, M.R.C.S., L.R.C.P., L.S.A.Lond., Medical Superintendent, Public Asylum, Jersey; The Myrtles, St. Saviour's, Jersey.

  Ladell, Robert George Macdonald, M.B., Ch.B.Vict., Medical Officer,
  Ministry of Pensions, 395, Coventry Road, Small Heath, 1914. Birmingham.
- Laing, John Kidd Collier, M.B., B.S.Melb., D.P.M., Assistant Medical 1923. Officer, Colney Hatch Mental Hospital, New Southgate, N. 11.
- Landers, John Joseph, M.B., B.Ch.Camb., D.P.H., Medical Officer, H.M. Boys' Prison, Wandsworth, S.W. 1925.
- 1896. Langdon-Down, Reginald L., M.A., M.B., B.Ch.Camb., M.R.C.P.Lond., Normansfield, Hampton Wick, Middlesex.

- Langton, Peregrine Stephen Brackenbury, M.B., B.S., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Royal Earlswood Insti-tution, Redhill, Surrey. IQIQ.
- Lascelles, William James, M.B., B.Ch.Belf., D.P.M.Eng., Assistant 1925. Medical Officer, Cane Hill Mental Hospital, Coulsdon, Surrey.
- Latham, Oliver, M.B., C.M.Syd., Pathologist, Mental Hospitals Labora-
- tory, Medical School, Newtown University, Sydney, N.S.W. Laval, Evariste, M.B., C.M.Edin., The Guildhall, Westminster, London, S.W. 1.
- Lavers, Norman, M.D.Brux., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Bailbrook House, Bath.

  Lawless, George Robert, F.R.C.S., L.R.C.P.Irel., Medical Superin-
- 1892. tendent, District Asylum, Armagh.
- 1870. Lawrence, Alexander, M.A., M.D., C.M.Aberd., 26, Hough Green, Chester.
- Lawrie, Macpherson, M.A., M.B., B.Ch.Camb., 34, Dover Street, W. 1. 1923.
- 1883. Layton, Henry Albert, M.R.C.S., L.R.C.P.Edin., 14, Northwick Terrace, London, N.W. 8.
- Leech, Henry Brougham, B.A., M.D., B.Ch.Dubl., Senior Assistant Medical Officer, County Asylum, Hatton, Warwick. Registrar 1923-24.)
- Leech, John Frederick Wolseley, B.A., M.D., B.Ch.Dubl., Assistant 1909. Medical Officer, Wilts County Asylum, Devizes.
- Leeper, Richard R., F.R.C.S., L.R.C.P.Irel., M.P.C., Medical Superintendent, St. Patrick's Hospital, Dublin. (Hon. Sec. to the Irish Division since 1911.)
- 1883. Legge, Richard John, M.D.R.U.I., L.R.C.S.Edin., 8, Bath Place, Cheltenham.
- Leggett, William, B.A., M.D., B.Ch.Dubl., Medical Officer, Smithston 1906. Asylum, Greenock, Scotland.
- Lewis, Edward, L.R.C.P.&S.Edin., F.R.F.P.S.Glasg., Medical Superintendent, Drymma Hall, Skewen, near Neath.
- Lewis, John Biddulph Strafford, M.R.C.S., L.R.C.P.Lond., D.P.H., 1924. Assistant Medical Officer, Claybury Mental Hospital, Woodford Bridge, Essex.
- Lilly, George Austen, M.C., M.A., M.D.Camb., M.R.C.S., L.R.C.P.Lond., D.P.M., Deputy Medical Superintendent, London County Mental Hospital, Banstead, Surrey.
- Litteljohn, Edward Salterne, M.R.C.S., L.R.C.P.Lond., Medical Super-1908. intendent, Manor Cert. Institution, Epsom.
- Littlejohn, Mary Victoria, M.B., Ch.B.Aberd., D.P.M., Assistant Medical Officer, County Mental Hospital, Hatton, Warwick.
- Livesay, Arthur William Bligh, M.B., C.M., F.R.C.S.Edin., Assistant Medical Officer, Norfolk County Mental Hospital, Thorpe, nr. Norwich.
- Lloydd-Dodd, Edward Hamilton Howard, L.R.C.P.&S.Irel., Assistant 1920. Medical Officer, Caterham Mental Hospital; The Firs, Coulsdon Road, Caterham, Surrey.
- Logan, Frederick Colquhoun, M.B., Ch.B., F.R.F.P.S.Glasg., Deputy Medical Superintendent, County Mental Hospital, Prestwich.
- Lord, John Robert, C.B.E., M.B., C.M.Edin., Medical Superintendent, Horton Mental Hospital, Epsom; Horton House, Epsom. (Co-Editor of Journal since 1911; Assistant Editor of Journal 1900–11; Secretary of the Post-Graduate Study Committee since 1920.) (PRESIDENT-ELECT, 1925-26.)
- 1924. Lornie, Peter, M.D., Ch.B.Edin., Senior Assistant Medical Officer, Monmouth County Mental Hospital, Abergavenny, Mon.
- Lothian, Douglas, B.M., M.B., Ch.B.Edin., D.P.M., Assistant Physician, 1924. Royal Edinburgh Hospital, Edinburgh.
- 1923. Lovell, Clement, M.D., B.S.Lond., Pathologist to the Royal Court of the Bridewell and Bethlem Hospitals; The Laboratory, Bethlem Royal Hospital, Lambeth, S.E. 1.

- 1906. Lowry, James Arthur, M.D., B.Ch.R.U.I., Medical Superintendent, Surrey County Mental Hospital, Brookwood.
- 1904. Lyall, C. H. Gibson, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Senior Assistant Medical Officer, City Mental Hospital, Humberstone, Leicester.
- 1923. Lynch, William Joseph, M.B., B.Ch.N.U.I., Assistant Medical Officer, Cheshire County Mental Hospital, Parkside, Macclesfield.
- 1923. Lyon, Thomas Malcolm Murray, M.D.Edin., J.P., 46, Palmerston Place, Edinburgh.
- 1920. McAlister, William Malcolm, M.A., M.B., Ch.B.Edin., Deputy Physician-Superintendent, Royal Hospital, Morningside, Edinburgh. (Lect. in Psychiatry, Univ. of Edin.)
- 1906. Macarthur, John, M.R.C.S., L.R.C.P.Lond., D.P.M., Medical Superintendent, District Mental Hospital, Bracebridge Heath, Lincoln.
- 1923. Macaulay, Douglas Ian Otto, M.D., Ch.B.Edin., D.P.M., Medical Superintendent, Chiswick House, Chiswick, W. 4.
- 1880. MacBryan, Henry Crawford, L.R.C.P.&S.Edin., Kingsdown House, Box, Wilts.
- 1923. McCarthy, Owen Felix, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Resident Medical Superintendent, Cork District Mental Hospital, Cork. (Lect. on Mental Dis., Univ. Coll., Cork.)
- 1900. McClintock, John, L.R.C.P.&S.Edin., Resident Medical Superintendent, Grove House, Church Stretton, Salop.
- 1922. McCord, Robert Neal Ballagh, M.B., B.Ch.Belf., Senior Assistant Medical Officer, Surrey County Mental Hospital, Brookwood, Woking, Surrey.
- 1920. McCowan, Peter Knight, M.D., Ch.B.Edin., M.R.C.P.Lond., D.P.M., Assistant Medical Officer, West Park Mental Hospital, Epsom, Surrey.
- 1921. McCutcheon, Archibald Munn, M.B., Ch.B., F.R.F.P.S.Glasg., Medical Superintendent, Monyhull Colony. King's Heath, Birmingham.
- 1923. Macdonald, Colin, L.R.F.P.S.Glasg., Medical Officer of Kilfinichen; Bunessau, Mull, by Oban, N.B.
- 1901. MacDonald, James Hogg, M.B., Ch.B., F.R.F.P.S.Glasg., Medical Superintendent, Govan District Asylum, Hawkhead, Cardonald, Glasgow. (Lect. on Psychol. Med., Univ. of Glasgow.)
- 1884. MacDonald, P. W., M.D., C.M.Aberd., J.P., Grasmere, Radipole, Weymouth. (First Hon. Sec. S.W. Div. 1894-1905). (PRESIDENT, 1907-8.)
- 1911. MacDonald, Ranald, O.B.E., M.D., Ch.B.Edin., D.P.M., Medical Superintendent. Coton Hill Mental Hospital, Stafford.
- 1905. MacDonald, William Fraser, M.B., Ch.B.Edin., M.P.C., Olive Lodge, Polworth Terrace, Edinburgh.
- 1905. McDougall, Alan, M.D., Ch.B.Vict., M.R.C.S., L.R.C.P.Lond., Medical Director, The David Lewis Colony, Warford, Alderley Edge, Cheshire.
- 1906. McDowall, Colin Francis Frederick, M.D., B.S. Durh., M. R.C.S., L. R.C.P. Lond., Medical Superintendent, Ticehurst House, Ticehurst, Sussex.
- 1870. McDowall, Thomas W., M.D., L.R.C.S.Edin., "Burwood," Wadhurst, Sussex. (President, 1897-8.)
- 1895. Macfarlane, Neil M., M.D., C.M.Aberd., Principal Medical Officer, Maseru, Basutoland, South Africa.
- 1924. Macfarlane, Robert Melvin, M.B., Ch.B.Edin., D.P.M., Assistant Medical Officer, West Ham Mental Hospital, Goodmayes, Ilford, Essex.
- 1923. McGarvey, John, M.B., B.Ch.Belf., Deputy Medical Superintendent, Somerset and Bath Mental Hospital, Wells.
- 1922. McGeorge, Margaret Turner, M.B., Ch.B.Glasg., Assistant Medical Officer, Camberwell House, Peckham Road, S.E. 5.

- 1925. McGlashan, William Reid, M.A., M.B., Ch.B.Aberd., D.P.M., Deputy Medical Superintendent, County Mental Hospital, Mickleover, Derby.
- 1925. MacGowan, Agnes Mildred, M.B., Ch.B.Edin., Assistant Medical Officer and Pathologist, Edinburgh District Mental Hospital, Bangour, West Lothian.
- 1921. McGrath, Mathew Joseph, M.B., B.Ch.R.U.I., D.P.M., Deputy Medical Superintendent, West Riding Asylum, Wakefield; Northcote, Peterson Road, Wakefield, Yorks.
- 1902. McGregor, John, M.B., Ch.B.Edin., Senior Assistant Medical Officer, County Asylum, Bridgend, Glam.
- 1924. McInnes, John, M.B., Ch.B.Glasg., D.P.M., Assistant Medical Officer, London County Mental Hospital, Bexley, Kent.
- 1921. McKail, Robert Buchanan Forbes, M.B., Ch.B.Glasg., Senior Assistant Medical Officer, "Calderstones" Certified Institution, Whalley, near Blackburn.
- 1924. Mackay, George William John, M.B., Ch.B.Edin., Assistant Medical Officer, St. Andrew's Hospital, Northampton.
- 1914. Mackay, Magnus Ross, M.C., M.B., Ch.B.Edin., Newport Borough Mental Hospital, Caerleon, Mon.
- 1891. Mackenzie, Henry James, M.B., C.M.Edin., M.P.C., 254, Bishopsthorpe Road, York.
- Mackenzie, John Cosserat, M.B., Ch.B.Edin., Assistant Medical Officer, Burntwood Mental Hospital, near Lichfield.
- 1903. Mackenzie, Theodore Charles, M.D., Ch.B., F.R.C.P.Edin., M.P.C., Medical Superintendent, District Asylum, Inverness.
- 1921. Mackie, George, D.S.O., M.D., Ch.B.Edin., Thornyhill, Abbey Road, Great Malvern.
- 1924. McLagan, Francis M., M.B., Ch.B.St.And., D.P.M., Assistant Medical Officer, Hanwell Mental Hospital, Southall, Middlesex.
- 1924. McLaughlin, Francis Leo, M.B., B.Ch.R.U.I., Assistant Medical Officer, Tirconsall Mental Hospital, Letterkenny, Ireland.
- 1921. Macleod, Neil, M.B., Ch.B.Edin., D.P.M., Assistant Physician, The Retreat, York.
- 1922. McLuskie, Peter, M.B., Ch.B.Glasg., D.P.M., Assistant Medical Officer, Cane Hill Mental Hospital, Coulsdon, Surrey.
- 1925. McManus, Hugh Charles, M.B., Ch.B.Vict., D.P.M., Assistant Medical Officer, Hants County Mental Hospital, Park Prewett, Basingstoke.
- 1923. MacNab, Robert Allan, M.B., Ch.B.Edin., Junior Assistant Medical Officer, Holloway Sanatorium, Virginia Water, Surrey.
- 1904. Macnamara, Eric Danvers, M.A., M.D., B.Ch.Camb., F.R.C.P.Lond., 87, Harley Street, London, W. 1. (Lect. on Psychol. Med., Charing Cross Hosp.)
- 1925. MacNiven, Angus, M.B., Ch.B., Resident Assistant Physician, Royal Mental Hospital, Gartnavel, Glasgow.
- 1910. MacPhail, Hector Duncan, O.B.E., M.A., M.D., Ch.B.Edin., Medical Superintendent, City Mental Hospital, Gosforth, Newcastle-on-Tyne. (Lect. on Psychol. Med., Univ. of Durh.)
- 1922. Macphail, Iain Ross, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Medical Superintendent, Kesteven County Mental Hospital, Greylees, Sleaford, Lincs.
- 1882. Macphail, Samuel Rutherford, M.D., C.M.Edin., Medical Superintendent, New Saughton Hall Mental Hospital; Linden Lodge, Loanhead, Midlothian.
- 1901. McRae, G. Douglas, M.D., C.M., F.R.C.P.Edin., J.P., Medical Superintendent, Glengall Hospital; Glengall House, Ayr, N.B. (Co-Editor of the Journal since 1920; Assistant Editor 1916-20.)
- 1894. McWilliam, Alexander, M.A., M.B., C.M.Aberd., Waterval, Odiham, Winchfield, Hants.
- 1922. McWilliam, William, M.B., Ch.B.Glasg., D.P.M., Senior Assistant Medical Officer, District Asylum, Inverness.

- Madgwick, John Reginald Alexander, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Colney Hatch Mental Hospital, New Souhtgate, London, N. 11.
- Madill, Joseph Thomas Herbert, B.A.N.U.I., M.B., B.Ch.Edin., 1923. F.R.F.P.S.Glasg., M.P.C., Senior Assistant Medical Officer, County Mental Hospital, Chester.
- Mapother, Edward, M.D., B.S.Lond., F.R.C.S.Eng., M.R.C.P.Lond., Medical Superintendent, The Maudsley Hospital, Denmark Hill, 1908. S.E. 5. (Lect. in Psychology, King's Coll. Hosp.)
- 1903. Marnan, John, B.A., M.B., B.Ch.Dubl., Medical Superintendent, County Asylum, Gloucester.
- 1896. Marr, Hamilton C., M.D., C.M., F.R.F.P.S.Glasg., M.P.C., H.M. Commissioner, General Board of Control for Scotland; 10, Succoth Avenue, Edinburgh. (Hon. Sec. Scottish Division, 1907-1910.)
- Marshall, Robert, M.D., B.Ch., F.R.C.P.Irel., D.P.H., 9, College Gardens, 1924. Belfast. (Medical Registrar, Royal Victoria Hospital, Belfast.)
- Martin, Frederick Robertson, M.B., Ch.B.Glasg., D.P.M., Assistant 1022. Medical Officer, Banstead Mental Hospital, Sutton, Surrey.
- 1896. Martin, James Charles, L.R.C.S.&P.Irel., J.P., Medical Superintendent, District Mental Hospital, Letterkenny, Donegal.
- Martin, Mary Edith, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., L.S.A.Lond., 1907. M.P.C., 11, The Drive, Hove, Sussex.
- Martin, Samuel Edgar, M.B., B.Ch.Edin., Barrister-at-Law, Medical Superintendent, The Old Manor, Salisbury. 1914.
- 1911. Martin, William Lewis, O.B.E., M.A., B.Sc., M.B., C.M.Edin., D.P.H., Dipl. Psych., M.P.C., Certifying Physician in Lunacy, Edinburgh Parish Council, 56, Bruntsfield Place, Edinburgh.
- Martyn, Pierce Patrick, M.B., B.Ch.R.U.I., Colonial Medical Service, British Honduras, Central America. 1922.
- Masefield, William Gordon, M.R.C.S., L.R.C.P.Lond., D.P.M., Medical EQ21. Superintendent, Essex County Mental Hospital, Brentwood.
- Mathieson, James Moir, M.B., Ch.B.Aberd., Assistant Medical Officer, 1911. South Yorks Asylum, Wadsley, Sheffield.
- 1890. Menzies, William F., B.Sc., M.D.Edin., F.R.C.P.Lond., Medical Superintendent, Stafford County Mental Hospital, Cheddleton, near Leek. (President, 1920-21.)
- 1877.
- Merson, John, M.A., M.D., C.M. Aberd., "Willerby," Brayton Road, Selby.
  Middlemiss, James Brnest, M.R.C.S., L.R.C.P.Lond., F.R.F.P.S.
  Glasg., M.P.C., Neurologist and Specialist in Psychotherapy, 1910. Ministry of Pensions, Leeds; 131, North Street, Leeds.
- 1924. Miller, Robert Stewart, M.D., Ch.B.Glasg., Director, El Khanka Mental Hospital, Egypt.
- Mills, John, M.B., B.Ch.R.U.I., D.M.D., Medical Superintendent, District Asylum, Ballinasloe, Ireland. 1893.
- Minski, Louis, M.B., B.S.Durh., Assistant Medical Officer, Bootham 1923. Park, York.
- IQ22. Molony, Charles Bernard, M.B., Ch.B.N.U.I., Assistant Medical Officer, Limerick Mental District Hospital, Limerick.
- Monnington, Richard Caldicott, M.D., Ch.B.Edin., D.P.H., D.P.M., 1910. Neurologist, Ministry of Pensions, 33, New Street, Salisbury.
- 4915. Monrad-Krohn, G. H., B.A., M.D., B.S.Oslo, M.R.C.S., M.R.C.P.Lond., M.P.C., Rikshospitalet, Oslo, Norway. (Prof. of Medicine, Royal Frederick University.)
- 4899. Moore, William D., M.D., M.Ch.R.U.I., Medical Superintendent, Holloway Sanatorium, Virginia Water, Surrey.
- Moran, Patrick, M.B., B.Ch.Belf., D.P.H., Assistant Medical Officer, District Mental Hospital, Mullingar.
- Morris, Bedlington Howel, M.B., B.S.Durh., Inspector-General of Hospitals, South Australia; "Tros-y-Parc," Pembroke Street, St. 1917. Peter's, Adelaide, S. Australia.
- 1925. Morris, John Vincent, M.B., B.Ch.Dubl., Assistant Medical Officer, Norfolk County Mental Hospital, Thorpe, Norwich.

- 1896. Morton, William Britain, M.D., M.R.C.S., L.R.C.P.Lond., Medical
- Superintendent, Wonford House, Exeter.

  Mott, Sir Frederick W., K.B.E., LL.D.Edin., M.D., B.S., F.R.C.P.Lond., 1896. F.R.S., 25, Nottingham Place, Marylebone, London, W. 1. (Lect. on Morbid Psychology, Univ. of Birmingham.) (PRESIDENT, 1925-26.)
- 1896. Mould, Gilbert Edward, M.R.C.S., L.R.C.P.Lond., The Grange, Rotherham, Yorks.
- 1897. Mould, Philip G., M.R.C.S., L.R.C.P.Lond., Oaklands, Walmersley, nr. Bury, Lancs.
- 1914. Moyes, John Murray, M.B., Ch.B.Edin., D.P.M., Assistant Superintendent. Northumberland Mental Hospital, Morpeth.
- Mules, Annie Shortridge, M.R.C.S., L.R.C.P.Lond., House Physician,
  Devon and Exeter Hospital; Court Hall, Kenton, S. Devon.
  Mules, Bertha Mary, M.D., B.S.Durh., Court Hall, Kenton, 1919.
- 1907. S. Devon.
- Muncaster, Anna Lilian, M.B., Ch.B.Edin., Valkenburg Mental Hospital, Cape Town, South Africa. IQII.
- Murdoch, James Wilson, M.B., Ch.B.Aberd., Junior Assistant Medical 1925. Officer, Devon Mental Hospital, Exminster.
- Navarra, Norman, M.R.C.S., L.R.C.P.Lond., D.P.M., Deputy Superin-1903. tendent, City of London Mental Hospital, Stone, Dartford.
- Neill, Alex. William, M.D., Ch.B.Edin., Physician-Superintendent, 1910. Warneford Mental Hospital, Oxford.
- Nelis, William F., M.D.Durh., L.R.C.P.Edin., L.R.F.P.S.Glasg., Medical Superintendent, Newport Borough Mental Hospital, 1903. Caerleon, Mon.
- Nicol, William Drew, M.R.C.S., L.R.C.P.Lond., D.P.M., Assistant 1920. Medical Officer, Horton Mental Hospital, Epsom, Surrey.
- 1923. Nicole, J. Ernest, L.M.S.S.A.Lond., Senior Assistant Medical Officer, Lancashire County Mental Hospital, Winwick, Warrington.
- Nicoll, James, M.D., C.M.Edin., D.P.H.Lond., Medical Superintendent,
   Fountain Mental Hospital, Tooting Grove, S.W. 17.
   Nicolson, David, C.B., M.D., C.M.Aberd., M.R.C.P.Edin., F.S.A.Scot., 1921.
- 1869. Hanley, Park Road, Camberley, Surrey. (President, 1895-6.)
- Nix, Sidney, M.D., B.S.Durh., L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., 1920. Deputy Medical Superintendent, Graylingwell Mental Hospital, Chichester.
- 1922. Noble, Ralph Athelstane, M.B., Ch.M.Syd., D.P.M., Medical Superintendent, Red Cross Hospitals for Nervous Diseases, N.S.W., Australia; "Montrose," 175, Macquarie Street, Sydney, N.S.W., Australia.
- 1888. Nolan, Michael J., L.R.C.P.&S.Irel., M.P.C., Medical Superintendent, District Asylum, Downpatrick. Consulting Visitor-in-Lunacy to the Lord Chief Justice, N. Ireland, and to the Chief Justice, S. Ireland. [President, 1924-25].
- Nolan, James Noël Green, B.A., M.D., B.Ch.Dubl., Deputy Medical Superintendent, East Sussex Mental Hospital, Hellingly. 1913.
- Norman, Hubert James, M.B., Ch.B., D.P.H.Edin., Medical Superin-1909. tendent, Camberwell House Asylum, Peckham Road, London, S.E. 5; 51, Crystal Palace Park Road, Sydenham, London, S.E. 26. (Lect. on Ment. Dis., Westminster Hosp.)
- Noronha, Frank, M.B., C.M.Madras, D.P.M., Superintendent, The 1923. Asylum, Avenue Road, Bangalore City, India.
- Odlum, Doris Maud, M.A.Oxon., B.A.Lond., M.R.C.S., L.R.C.P.Lond., 1924. Lady Chichester Hospital, Hove, Sussex.
- O'Doherty, Patrick, B.A., M.B., B.Ch.R.U.I., Resident Medical Super-1903. intendent, District Mental Hospital, Sligo.
- 1918. Ogilvie, William Mitchell, M.B., C.M.Aberd., Medical Superintendent, Ipswich Mental Hospital, Ipswich.

- 1901. Ogilvy, David, B.A., M.D., B.Ch.Dubl., Medical Superintendent, London County Mental Hospital, Long Grove, Epsom.
- 1911. Oliver, Norman Henry, M.R.C.S., L.R.C.P.Lond., Barrister-at-Law, Medical Superintendent, Ministry of Pensions Hospital, Latchmere, Ham Common, Surrey.
- 1922. O'Flaherty, Rev. Claude, M.B., Ch.B.Edin., 29, Palmerston Place, Edinburgh.
- 1920. O'Neill, Arthur, O.B.E., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Napsbury Mental Hospital, nr. St. Albans, Herts.
- 1924. O'Reilly, James Joseph, M.B., B.Ch.Belf., Assistant Medical Officer,
  Dorset County Mental Hospital, Herrison, Dorchester.
- 1902. Orr, David, M.D., C.M.Edin., M.P.C., c/o The Manager, District Bank, Prestwich.
   1910. Orr, James Henry Cubitt, M.D., Ch.B.Edin., Medical Superintendent,
- Midlothian Asylum, Rosslyn Castle.

  1914. Osburne, John C., M.B., B.Ch.N.U.I., c/o Glyn, Mills & Co., 3, White-
- hall Place, S.W. 1. 1890. Oswald, Landel Rose, M.B., C.M.Glasg., M.P.C., c/o The Manse, Thorn-
- hill, Dumfriesshire.

  1916. Overbeck-Wright, Alexander William, M.D., Ch.B.Aberd., D.P.H.,
  M.P.C., I.M.S., Superintendent, Asylum House, Agra, U.P., India.

  Address: c/o Messrs. King, King & Co., Bombay, India.
- 1905. Paine, Frederick, M.D.Brux., M.R.C.S., M.R.C.P.Lond., D.P.M., Deputy Medical Superintendent, Claybury Mental Hospital, Woodford Bridge, Essex.
- Bridge, Essex.

  1923. Pailthorpe, Grace Winifred, M.B., B.S.Durh., 40, Parliament Hill

  Mansions, Highgate Road, N.W. 5.
- 1920. Parkin, George Gray, M.B., Ch.B. Vict., Deputy Medical Superintendent,
  Cheshire County Mental Hospital, Parkside, Macclesfield.
- 1920. Parnis, Henry William, B.Sc., M.D.Malta, M.R.C.S., L.R.C.P.Lond., D.P.M., Assistant Medical Officer, Claybury Mental Hospital, Woodford Bridge, Essex.
- 1898. Pasmore, Edwin Stephen, M.D., M.R.C.P.Lond., Medical Superintendent, Croydon Mental Hospital, Chelsham House, Upper Warlingham.
- 1916. Patch, Charles James Lodge, M.C., L.R.C.P.& S.Edin., L.R.F.P.S. Glasg., Capt. I.M.S., c/o Lloyds Bank, Ltd. (King's Branch), 6, Pall Mall, S.W. 1.
- 1899. Patrick, John, M.B., Ch.B.R.U.I., Medical Superintendent, District Asylum, Omagh, Ireland.
- 1907. Peachell, George Ernest, M.D., B.S., M.R.C.S., L.R.C.P.Lond., M.P.C., Medical Superintendent, Dorset County Mental Hospital, Herrison, Dorchester.
- 1910. Pearn, Oscar Phillips Napier, M.R.C.S., L.R.C.P., L.S.A.Lond., D.P.M., Deputy Medical Superintendent, Cane Hill Mental Hospital, Coulsdon, Surrey.
- 1913. Penny, Robert Augustus Greenwood, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Devon County Mental Hospital, Exminster.
- 1920. Penson, John Frederick, M.A., M.B., B.Ch.Oxon., M.R.C.S., L.R.C.P. Lond., D.P.M., Glanfield, Alexandra Road, Reading.
- 1911. Petrie, Alfred Alexander Webster, M.D., M.R.C.P.Lond., F.R.C.S.Edin., D.P.M., Medical Superintendent, London County Mental Hospital, Banstead, Surrey. (Lect. on Ment. Dis., West Lond. Post-Grad. College.)
- 1908. Phillips, John George Porter, M.D., B.S., M.R.C.S., F.R.C.P.Lond., M.P.C., Resident Physician and Superintendent, Bethlem Royal Hospital, Lambeth, London, S.E. 1. (Lect. on Ment. Dis., Bart.'s Hosp. and Lond. Sch. of Med. for Women.) (Secretary of Educational Committee, 1913-20.)
- 1910. Phillips, John Robert Parry, O.B.E., M.R.C.S., L.R.C.P.Lond., Northwoods House, Winterbourne, Bristol.

- 1906. Phillips, Nathaniel Richard, M.D.Brux., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Monmouthshire County Asylum, Abergavenny.
- Phillips, Norman Routh, M.D.Brux., M.R.C.S., L.R.C.P.Lond., Senior 1905. Assistant Medical Officer, St. Andrew's Hospital, Northampton.
- Phillips, Philip Gordon, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Medical 1021. Superintendent, Ministry of Pensions Neurological Hospital, Oulton Hall, Woodlesford, near Leeds.
- 1924. Pickworth, Frederick Alfred, B.Sc., M.B., B.S., M.R.C.S., L.R.C.P.Lond., A.I.C.(exam.), Ph.C., Pathologist to Joint Board of Research for Mental Diseases, City University of Birmingham; Hollymoor Mental Hospital, Northfield, Birmingham.
- Pierce, Bedford, M.D., F.R.C.P.Lond., "Rosewood," Middlecave Road, 1891. Malton, Yorks. (Hon. Secretary, N. and M. Division, 1900-8.) (President, 1919.)
- 1888. Pietersen, James F. G., M.R.C.S., L.R.C.P.Lond., Ashwood House, Kingswinford, near Dudley, Stafford.
- Planck, Charles, M.A.Camb., M.R.C.S., L.R.C.P.Lond., "Pontresina," 1896. Perrymount Road, Haywards Heath.
- Plummer, Edgar Curnow, M.R.C.S., L.R.C.P.Lond., St. Faith's, Mount 1912.
- Park Road, Ealing, W. 5.
  Pope, George Stevens, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Medical 1889. Superintendent, Heigham Hall, Norwich.
- Potts, William A., M.A.Camb., M.D.Edin.& Birm., M.R.C.S., L.R.C.P. 1913. Lond., Medical Officer to the Birmingham Committee for the Care of the Feeble-minded, 118, Hagley Road, Birmingham.

  Power, Patrick William, L.R.C.P.&S.Irel., Senior Assistant Medical
- 1916. Officer, Upton County Mental Hospital, Upton, Chester.
- 1923. Power, Thomas Declan, B.A., M.D., B.Ch.Dubl., M.R.C.P.Lond., D.P.H., D.P.M., Assistant Medical Officer, Essex County Mental Hospital, Brentwood, Essex.
- Poynder, Ernest George Thornton, M.R.C.S., L.R.C.P.Lond., D.P.M. 1921. Assistant Medical Officer, Long Grove Mental Hospital, Epsom.
- Prentice, Reginald Wickham, L.M.S.S.A.Lond., Bridge House, 1008. Ringwood, Hants.
- 1918. Prideaux, John Joseph Francis Engledue, M.R.C.S., L.R.C.P.Lond., D.C.M.S. Ministry of Pensions, 1, Sanctuary Buildings, Great Smith Street, S.W. 1.
- Rambaut, Daniel F., M.A., M.D., B.Ch.Dubl., Medical Superintendent, 1894. St. Andrew's Hospital, Northampton; Priory Cottage, Northampton. (Registrar since 1924.)
- Raw, Nathan, C.M.G., M.D., B.S., L.S.Sc.Durh., F.R.C.S.Edin., M.R.C.P.Lond., M.P.C., F.R.S.Edin., Lord Chancellor's Visitor; 1889. The Green, Richmond, Surrey.
- Rayner, Henry, M.D.Aberd., M.R.C.P.Edin., Upper Terrace House, Hampstead, London, N.W. 3. (President, 1884-85.) (General 1870. Secretary, 1877-89.) (Co-Editor of Journal, 1895-1911.)
- Read, Charles Stanford, M.D., M.R.C.S., L.R.C.P.Lond., 11, Weymouth 1913. Street, London, W. 1.
- 1920. Read, Walter Wolfe, M.D.Brux., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Berkshire County Mental Hospital, Wallingford,
- Redington, John Murray, F.R.C.S., L.R.C.P.Irel., The Bungalow, 1899. Rockbarton, Salthill, Galway.
- Reed, John Charles Groscort, M.R.C.S., L.R.C.P.Lond., Assistant 1924. Medical Officer, The Old Manor, Salisbury.
- Reeve, Ernest Frederick, M.B., B.S., M.R.C.S., L.R.C.P.Lond., 1911. Medical Superintendent, County Mental Hospital, Rainhill. (Lect. on Ment. Dis., Univ. of Liverp.)
- Reid, Daniel McKinley, M.D., Ch.B., F.R.F.P.S.Glasg., Medical Superintendent, City Mental Hospital, Exeter. 1911.

- Reid, James, L.R.C.P.&.S.Edin., Assistant Medical Officer, Hereford 1924. County Mental Hospital, Burghill, Hereford.
- Reid, William, M.A.St.And., M.B., Ch.B.Edin., Medical Superintendent, 1910. Burntwood Mental Hospital, near Lichfield.
- Retallack-Moloney, Herbert Thomas, M.R.C.S., L.R.C.P.Lond., Assistant 1923. Medical Officer, Claybury Mental Hospital, Woodford Bridge, Essex.
- Reynolds, Francis Esmond, M.B., Ch.B.Edin., Pathologist, Scottish Asylums Pathological Scheme, Royal Infirmary, Edinburgh. 1925.
- (Lect. on Neuro-Pathology, Univ. of Edin.)
  Rice, David, M.D.Brux., M.R.C.S., L.R.C.P.Lond., D.P.H., Medical
  Superintendent, City Mental Hospital, Hillesdon, Norwich. 1899.
- Richards, William John, M.A., M.B., C.M., F.R.F.P.S.Glasg., Medical 1897. Superintendent, South General Hospital; Merryflats House, Govan, Glasgow.
- 1899. Richards, John, M.B., C.M., F.R.C.S.Edin., Medical Superintendent, Joint Counties Mental Hospital, Carmarthen.
- Riches, Reginald George, M.R.C.S., L.R.C.P.Lond., D.P.M., Deputy 1022. Medical Superintendent, Hanwell Mental Hospital, Southall, Middlesex.
- Rickman, John, M.A., M.B., B.Ch.Camb., Clinical Assistant, Mental 1920. Out-Patients, St. Thomas's Hospital; 26, Devonshire Place, W. 1.
- Robarts, Henry Howard, M.D., Ch.B.Edin., D.P.H., Medical Officer, IQII. District Asylum; Ennerdale, Haddington, Scotland.
- Robb, John Robert Beith, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Assis-1022. tant Physician, Gartloch Mental Hospital, Gartcosh, N.B.
- Roberts, Edward Douglas Thomas, M.R.C.S., L.R.C.P.Lond., D.P.M., 1921. Assistant Medical Officer, Herts County Mental Hospital, Hill End, St. Albans.
- Roberts, Norcliffe, O.B.E., M.D., B.S.Durh., D.P.M., Medical Super-intendent, West Park Mental Hospital, Epsom, Surrey. 1903.
- Robertson, Geo. M., M.D., C.M., F.R.C.P.Edin., M.P.C., Physician-1887. Superintendent, Royal Hospital, Morningside, Edinburgh; Tipperlin House, Morningside Place, Edinburgh. (Prof. of Psychiatry,
- Univ. of Edinburgh.) (PRESIDENT, 1922-23.)
  Robertson, George Dunlop, L.R.C.S.&P.Edin., L.R.F.P.S.Glasg., Dipl. 1908. Psych., Senior Assistant Physician, District Asylum, Hartwood,
- 1920. Robinson, William, M.D., Ch.B.Leeds, D.P.M., Medical Superintendent, City of London Mental Hospital, Stone, Dartford.
- Rodger, Kenneth Mann, M.B., Ch.B.Glasg., D.P.M., Dechmont, Helouan. 1922.
- Rodger, Murdoch Mann, M.D., Ch.B.Glasg., Dechmont, Helouan. 1914.
- Rodgers, Frederick Millar, O.B.E., M.D., Ch.B.Vict., D.P.H., Medical 1908. Superintendent, County Mental Hospital, Winwick.
- Rolleston, Lancelot William, C.B.E., M.B., B.S.Durh., M.R.C.S., L.R.C.P. 1895. Lond., Queen Anne's Mansions, St. James's Park, S.W. 1. Rollins, Ernest Edward, B.A., M.B., B.Ch.Dubl., 38, Warwick Road,
- 1922. Earl's Court, S.W. 5.
- Roscrow, Cecil Beaumont, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Medical 1920. Superintendent, City Mental Hospital, Winson Green, Birmingham. (Lect. and Exam. Ment. Dis., Birmingham Univ.)
- Rose, Edward Snow, M.R.C.S., L.R.C.P.Lond., Lansdowne House, 1924. Romsey, Hants.
- Ross, Chisholm, M.D.Syd., M.B., C.M.Edin., 225, Macquarie Street, 1888. Sydney, New South Wales.
- Ross, Donald, M.B., Ch.B.Edin., M.P.C., Medical Superintendent, 1910. Argyll and Bute Asylum; Tigh-ma-Linne, Lochgilphead, Argyll.
- Ross, Thomas Arthur, M.D., C.M., F.R.C.P.Edin., Medical Director. 1923. Cassel Hospital for Functional Nervous Disorders, Swaylands, Penshurst, Kent.
- Rotherham, Arthur, M.A., M.B., B.Ch.Camb., Commissioner, Board of Control, 66, Victoria Street, Westminster, London, S.W. 1; Elm House, Marshall Road, Farncombe, Surrey.

- 1922. Roy, John Allen Chisholm, M.B., Ch.B.Vict., Medical Superintendent, Cheadle Royal, Cheadle, Cheshire.
- 1924. Rudolf, Gerald de Montjoie, M.R.C.S., L.R.C.P.Lond., D.P.H., D.P.M.,
  Assistant Medical Officer, Claybury Mental Hospital, Woodford
  Bridge, Essex; North House, Claybury.
- 1877. Russell, Arthur Pickston, M.B., C.M., M.R.C.P.Edin., Kettleby Thorpe, Brigg, Lincs.
- 1923. Russell, John, M.B., Ch.B.Glasg., D.P.M., Assistant Medical Officer, West Riding Mental Hospital, Menston, nr. Leeds.
- 1912. Russell, John Ivison, M.B., Ch.B., F.R.F.P.S.Glasg., D.P.M., M.P.C., Medical Superintendent, North Riding Asylum, Clifton.
- 1915. Russell, William, M.C., M.D., Ch.B.Edin., Dip. Psych., D.T.M., Physician Superintendent, Witrand Institution, Potchefstroom, South Africa.
- 1912. Rutherford, Cecil, B.A., M.B., B.Ch.Dubl., Assistant Medical Officer, Holloway Sanatorium, Virginia Water, Surrey.
- 1907. Rutherford, Henry Richard Charles, F.R.C.S., L.R.C.P.Irel., D.P.H., Medical Superintendent, Farnham House, Finglas, co. Dublin.
- 1896. Rutherford, James Mair, M.B., C.M., F.R.C.P.Edin., M.P.C., Brislington House, Bristol.
- 1922. Ruthven, Morton Wood, M.B., Ch.B.Edin., D.T.M., Assistant Medical Officer, Banstead Mental Hospital, Sutton, Surrey.
- 1902. Sall, Ernest Frederick, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, City Mental Hospital, Canterbury.
- 1924. Samuel, Edward Jeffrey, M.B., B.S.Lond., Senior Assistant Medical Officer, Peckham House Mental Hospital, Peckham, S.E. 15.
- Samuels, William Frederick, L.M., L.Ch.Dubl., Medical Superintendent, Central Mental Hospital, Tanjong Rambutan, F.M.S.; c/o West India Committee, 14, Trinity Square, S.E. 1.
   Sang, Janet Adeline Agnes, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Assis-
- 1923. Sang, Janet Adeline Agnes, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Assistant Medical Officer, County Mental Hospital, Prestwich, Manchester.
- 1894. Sankey, Edward Hugh Octavius, M.A., M.B., B.Ch.Camb., Resident Medical Licensee, Boreatton Park, Baschurch, Salop.
- 1906. Scanlan, John James, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., D.P.H., Broad Street House, Old Broad Street, London, E.C. 2.
- 1925. Scott, Francis Leonard, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Kent County Mental Hospital, Maidstone.
- 1911. Scroope, Gervace Wm. Mavy, M.B., B.Ch.Dubl., Assistant Medical Officer, Central Asylum, Dundrum, co. Dublin.
- 1880. Seccombe, George Samuel, M.R.C.S., L.R.C.P.Lond., c/o Lloyds Bank, Threadneedle Street, London, E.C. 3.
- 1925. Selkirk, Elizabeth Thompson, M.B., Ch.B.Edin., Assistant Medical Officer, City Mental Hospital, Winson Green, Birmingham.
- 1912. Sergeant, John Noel, M.B., B.S., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Newlands House, Tooting Bec Common, London, S.W. 17. (Secretary South-Eastern Division since 1913.)
- Severn, Adolphe Gladstone Millott, B.A., M.D.Brux., M.R.C.S., L.R.C.P.
   Lond., D.P.H., F.C.S., F.R.I.P.H., Barrister-at-Law, Medical Officer of Health, Sanitary Department, Hong Kong.
   Shand, George Ernest, M.D., Ch.B.Aberd., D.P.H., Senior Assistant
- 1925. Shand, George Ernest, M.D., Ch.B.Aberd., D.P.H., Senior Assistant Medical Officer, City Mental Hospital, Winson Green, Birmingham; 307, Gillott Road, Edgbaston, Birmingham.
- 1901. Shaw, Benjamin Henry, M.D., B.Ch.R.U.I., Medical Superintendent, County Mental Hospital, Stafford.
- 1905. Shaw, Charles John, M.D., Ch.B., F.R.C.P.Edin., J.P., Medical Superintendent, Royal Asylum, Montrose.
- 1917. Shaw, John Custance, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, West Ham Borough Mental Hospital, Goodmayes, Essex.
- 1904. Shaw, Patrick, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Medical Superintendent, Hospital for Insane, Ballarat, Victoria, Australia.

- Shaw, William Samuel Jagoe, M.D.Belf., M.B., B.Ch. R.U.I., Lt.-Col. I.M.S., Superintendent, Central Hospital for Mental Diseases, Yeravda, Poona; c/o Messrs. Grindlay & Co., 54, Parliament Street, S.W. 1.
- Shearer, Christina Hamilton, M.B., Ch.B.Glasg., Senior Medical Officer, 1920. Cassel's Hospital, Swaylands, Penshurst, Kent.
- Shepherd, Charles Ernest Alan, M.R.C.S., L.R.C.P.Lond., D.P.M., Assis-1923. tant Medical Officer, West Park Mental Hospital, Epsom, Surrey.
- Shera, John Egar Percival, M.D.Brux., L.R.C.P.&S.Irel., Medical 1900. Superintendent, Somerset County Asylum, Wells, Somerset.
- Sherlock, Edward Birchall, B.Sc., M.D.Lond., D.P.H., Barrister-at-1914. Law, Medical Superintendent, Darenth Industrial Colony, Dartford.
- Shield, Hubert, M.C., M.B., B.S.Durh., Assistant Medical Officer, 1914. Gateshead Mental Hospital; 73, Holly Avenue, Jesmond, Newcastle-on-Tyne.
- Shore, G. W., M.D.Lond., D.P.H., D.P.M., Assistant Medical Officer, Springfield Mental Hospital, Tooting, London, S.W. 17.
- Shortt, Jane Elder, M.B., Ch.B.Glasg., Resident Medical Superinten-1922. dent, The Lawn, Lincoln.
- Shuttleworth, George E., B.A.Lond., M.D.Heidelb., M.R.C.S., L.S.A. 1877. Lond., 36, Lambolle Road, Hampstead, London, N.W. 3.
- Simpson, Alexander, C.B.E., M.A., M.D., C.M.Aberd., c<sub>i</sub>o County Mental Hospital, Winwick, Warrington.
   Simpson, Edward Swan, M.C., M.D., Ch.B.Edin., Medical Superin-IQOI.
- 1905. tendent, East Riding Mental Hospital, Beverley, Yorks.
- Skeen, James Humphry, M.B., C.M.Aberd., M.P.C., Medical Superin-1891. tendent, Fife and Kinross District Asylum, Cupar, N.B.
- Skene, Leslie Henderson, M.C., M.B., Ch.B.Edin., Dipl. Psych., Medical 1921. Superintendent, Mental Hospital, Union Mills, Isle of Man.
- Skottowe, James Stewart Ian, M.B., Ch.B.Glasg., Assistant Medical 1925. Officer, Royal Mental Hospital, Gartnavel, Glasgow.
- Slaney, Chas. Newnham, M.R.C.S., L.R.C.P.Lond., 21, Walton Park, 1914. Liverpool.
- Slater, George Nathan Oscroft, M.D., M.R.C.S., L.R.C.P.Lond., 1901. Senior Assistant Medical Officer, Essex County Mental Hospital, Brentwood.
- Smith, Gayton Warwick, M.D.Lond., B.S.Durh., M.R.C.S., L.R.C.P. IQIO. Lond., D.P.H., Senior Assistant Medical Officer, Springfield Mental Hospital, Tooting, London, S.W. 17.
- Smith, George William, O.B.E., M.B., Ch.B.Edin., Wyke House, 1905. Isleworth, Middlesex.
- Smith, Henry Watson, O.B.E., M.D., Ch.B.Aberd., Director, Lebanon 1907. Hospital, Asfuriyeh, nr. Beyrout, Syria.
- Smith, Herbert, M.R.C.S., L.R.C.P.Lond., Deputy Medical Superin-1923. tendent, City Mental Hospital, Fishponds, Bristol.
- 1899. Smith, John Grimmond, M.D., C.M.Edin., Medical Superintendent, County and City Mental Hospital, Burghill, nr. Hereford.
- Smith, Maurice Hamblin, M.A.Camb., M.D.Durh., M.R.C.S., L.R.C.P. 1920. Lond., H.M. Prison, Birmingham. (Lecturer on Criminology, Univ. of Birmingham.)
- 1885. Smith, R. Percy, M.D., B.S., F.R.C.P.Lond., M.P.C., 36, Queen Anne Street, Cavendish Square, London, W. 1. (General Secretary, Chairman Educational Committee, 1899-1903.) (PRESI-1896–7. DENT, 1904-5.)
- 1913. Smith, Thomas Cyril, M.B., Ch.B.Edin., Assistant Medical Officer (2nd), County Asylum, Barnwood, Gloucester.
- Smith, Thomas Waddelow, F.R.C.S.Eng., L.R.C.P., L.S.A.Lond., IQII. M.P.C., Deputy Medical Superintendent, City Mental Hospital, Nottingham.
- Smith, Walter Richard Hugh, B.A., M.D., B.Ch.Dubl., Senior Assistant IQIA. Medical Officer, Salop County Mental Hospital, Bicton Heath, Shrewsbury.

- Smyth, Geoffrey Norman, L.R.C.P.&S.Irel., 189, Richmond Park, 1920.
- 1921. Smyth, John Francis, M.B., B.Ch.N.U.I., Assistant Medical Officer, West Riding Asylum, Wakefield.
- Smyth, Walter Samuel, M.B., B.Ch.R.U.I., Assistant Medical Super-1899. intendent, County Asylum, Antrim.
- Somerville, George, M.B., Ch.B.Edin., D.P.M., Assistant Medical Officer. 1923. West Ham Mental Hospital, Goodmayes, Ilford.
- Somerville, Henry, B.Sc., M.R.C.S., L.R.C.P.Lond., F.C.S., Harrold, 1913. Sharnbrook, S.O., Beds.
- 1885. Soutar, James Greig, M.B., C.M.Edin., M.P.C., 20, Royal Parade, Cheltenham. (PRESIDENT, 1912-13.)
- Spark, Percy Charles, M.R.C.S., L.R.C.P.Lond., 13, South Croxted 1906. Road, Dulwich, S.E. 21.
- Speer, James Millar Craig, M.B., B.Ch.Belf., Assistant Medical Officer, 1925. Wilts County Mental Hospital, Devizes.
- Spence, J. Beveridge, O.B.E., M.D., M.Ch.Q.U.I., L.A.H.Dubl., 1, 1875. St. Matthew's Road, St. Leonards-on-Sea. (First Registrar, 1892-1899; Chairman Parliamentary Committee, 1910-12.) (PRESIDENT, 1899-1900.)
- Spence, Thomas Reginald Carwardine, M.C., M.B., Ch.B.Edin., Deputy 1922. Medical Superintendent, Kesteven County Asylum, Sleaford, Lincs.
- Stafford, Harry, M.B., Ch.B.Manch., Assistant Medical Officer and 1925. Pathologist, Parkside Hospital, Macclesfield, Cheshire.
- 1920. Staley, Mildred Ernestine, M.B., B.S.Lond., 28, Grand View Road, Ramuera, Auckland, New Zealand.
- Stansfield, Thomas Edward Knowles, C.B.E., M.B., C.M.Edin., South-1891. mead, Wimbledon Park, London, S.W. 19.
- Starkey, William, M.B., B.Ch.R.U.I., Medical Superintendent, Plymouth IQOI. Mental Hospital, Blackadon, Ivybridge, S. Devon. (Secretary South-Western Division, since 1922.)
- Steel, Samuel Maxwell, M.B., Ch.B.Glasg., Assistant Medical Officer, 1925. Monyhull Colony, Kings Heath, Birmingham.
- Steele, Patrick, M.D., Ch.B., F.R.C.P.Edin., Medical Superintendent, 1907. Roxburgh District Asylum; The Hermitage, Melrose.
- Steen, Robert Hunter, B.A.R.U.I., M.D., F.R.C.P.Lond., 51, Suther-1898. land Avenue, Bexhill-on-Sea. (Hon. Sec. S.E. Division, 1905-10; Acting Gen. Sec. and Gen. Sec. 1915-19.)
- Stephens, Harold Freize, M.R.C.S., L.R.C.P.Lond., The Manor Cert. 1914. Institution for Mental Defectives, Epsom, Surrey.
- Steward, Sidney John, D.S.O., M.D., B.Ch.Camb., M.R.C.S., L.R.C.P. 1909.
- Lond., D.P.H., Langton Lodge, Farncombe, Surrey. Stewart, Francis Hugh, M.A., D.Sc.St.And., M.D., Ch.B.Edin., Assistant Medical Officer, County Mental Hospital, Cheddleton, Staffs.
- Stewart, Rothsay Charles, M.R.C.S., L.S.A.Lond., Medical Superintendent, County Mental Hospital, Narborough, nr. Leicester. 1887.
- Stewart, Roy MacKenzie, M.D., Ch.B., M.R.C.P.Edin., D.P.M., Medical 1914. Superintendent, Leavesden Mental Hospital; Woodside, Leavesden, Watford.
- Stilwell, Henry Francis, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Hayes 1905. Park, Hayes, Middlesex.
- Stilwell, Reginald John, M.R.C.S., L.R.C.P.Lond., Moorcroft House, 1899. Hillingdon, Middlesex.
- Stoddart, William Henry Butter, M.D., B.S., F.R.C.P.Lond., M.R.C.S. 1807. Eng., M.P.C., Harcourt House, Cavendish Square, London, W. 1. (Hon. Sec. Educational Committee, 1908-1912.) (Lect. on Ment. Dis., St. Thomas's Hosp.)
- Stokes, Frederick Ernest, M.D., Ch.B.Glasg., D.P.H., Senior Assistant 1909. Medical Officer, Borough Mental Hospital, Portsmouth.
- 1903. Stratton, Percy Haughton, M.R.C.S., L.R.C.P.Lond., York Lodge, Cliff Cottage Road, Bournemouth.

- 1885. Street, Charles Tidbury, M.R.C.S., L.R.C.P.Lond., Haydock Lodge, Newton-le-Willows, Lancs.
- 1909. Stuart, Frederick Joshua, O.B.E., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Northampton County Mental Hospital, Berrywood.
- 1924. Sturrock, Alexander Corsar, M.A., M.D., C.M.Edin., M.R.C.P.Lond., Physician, Salford Royal Hospital; Preston House, Eccles, Manchester.
- 1900. Sturrock, James Prain, M.A.St.And., M.D., C.M.Edin., H.M. Commissioner, General Board of Control for Scotland, 36, Murrayfield Road, Edinburgh.
- 1886. Suffern, Alex. Canning, O.B.E., M.D., M.Ch.R.U.I., Glen-y-Mor, Hill Head, Fareham, Hants.
- 1921. Suffern, Canning, M.A., M.B., B.Ch.Camb., M.R.C.S., L.R.C.P.Lond., Glen-y-Mor, Hill Head, Fareham, Hants.
- 1922. Sullivan, Patrick Daniel, F.R.C.S., L.R.C.P.Irel., Medical Superintendent, Verville Asylum, Clontarf, co. Dublin; 44, Harrington Street, Dublin.
- 1894. Sullivan, William Charles, M.D., B.Ch.R.U.I., Medical Superintendent, State Criminal Lunatic Asylum, Broadmoor, Crowthorne, Berks.
- 1918. Sutherland, Francis, M.B., Ch.B.Edin., D.P.H., Portree, Isle of Skye.
- Suttie, Ian D., M.B., Ch.B., F.R.F.P.S.Glasg., Medical Superintendent, C.L.D., Perth Prison, Perth.
- 1908. Swift, Eric W. D., M.B.Lond., Physician, Valkenberg Mental Hospital, Observataens, Cape Town, S. Africa.
- 1923. Tattersall, Stanley Roy, M.R.C.S., L.R.C.P.Lond., Pathologist, County Mental Hospital, Lancaster.
- 1910. Taylor, Arthur Loudoun, B.Sc., M.B., Ch.B., F.R.C.P.Edin., Senior Assistant Medical Officer, County Mental Hospital, Burntwood, Lichfield.
- 1924. Taylor, Frederic Cecil Marsh, M.R.C.S., L.R.C.P.Lond., D.P.M., Kent County Mental Hospital, Chartham Downs, nr. Canterbury.
- 1897. Taylor, Frederic Ryott Percival, M.D., B.S., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, East Sussex Mental Hospital, Hellingly.
- 1925. Taylor, Robert, L.R.C.P.&S.Irel., Assistant Medical Officer, St. Patrick's Hospital, Dublin.
- 1921. Thomas, Cyril James, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, County Mental Hospital, Lancaster.
- 1920. Thomas, Frederic Percival Selwyn, M.D., Ch.B.Vict., The Oaks, Porthill, Staffordshire.
- 1908. Thomas, Joseph David, B.A., M.B., B.C.Camb., Northwoods House, Winterbourne, Bristol.
- 1911. Thomas, William Rees, M.D., B.S., M.R.C.S., M.R.C.P.Lond., D.P.M., M.P.C., Medical Superintendent, Rampton State Institution, near Retford, Notts; Gray Ridges, Woodbeck, Retford, Notts.
- 1921. Thompson, James Arthur, B.A., M.B., B.Ch.Dubl., Surgeon-Cdr. R.N., Royal Naval Hospital, Haslar.
- 1925. Thompson, Robert, M.B., B.Ch.Belf., St. Patrick's Hospital, James's Street, Dublin.
- 1921. Thomson, Aidan Gordon Wemyss, M.B., Ch.B.Glasg., Assistant Physician, Glasgow Royal Asylum, Gartnavel.
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  Deputy Medical Superintendent, Cheadle Royal, Cheadle, Cheshire.
- 1901. Tighe, John Valerian George Brosnan, M.B., B.Ch.R.U.I., Medical Superintendent, Gateshead Mental Hospital, Stannington, Northumberland.
- 1914. Tisdall, Charles Jerome, M.B., Ch.B.Edin., Tue Brook Villa, Liverpool.
- 1903. Topham, J. Arthur, B.A.Camb., M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer, Kent County Mental Hospital, Chartham, Canterbury.
- 1896. Townsend, Arthur Allen Deykin, M.D., B.Ch.Birm., M.R.C.S., L.R.C.P. Lond., Medical Superintendent, Barnwood House Hospital for Insane, Gloucester.

- Tredgold, Alfred Frank, M.D.Durh., M.R.C.S., M.R.C.P.Lond., F.R.S. 1903. Edin., "St. Martin's," Guildford, Surrey.
- Tuach-MacKenzie, William, M.D., Ch.B.Aberd., Physician Superinten-1908. dent, Royal and District Asylums, Dundee; Westgreen, Dundee. (Lect. on Ment. Dis., St. And. Univ.)
- Turnbull, Peter Mortimer, M.C., M.B., B.Ch.Aberd., Senior Assistant 1006. Medical Officer, Mental Hospital, Caterham.
- Turnbull, Robert Cyril, M.D., M.R.C.S., L.R.C.P.Lond., Medical 1909. Superintendent, Essex County Mental Hospital, Colchester.
- 1889. Turner, Alfred, M.D., C.M.Edin., Medical Superintendent, Plympton House, Plympton, S. Devon.
- 1906. Turner, Frank Douglas, M.B., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Royal Eastern Counties Institution, Colchester.
- Twomey, John Christopher, M.B., Ch.B.Liverp., D.P.H., Assistant Physician, The Mental Hospital, Queenstown, South Africa; c/o 1922. Secretary for Interior, Pretoria.
- Vevers, Oswald Henry, M.R.C.S., L.R.C.P.Lond., Norton Vicarage, 1017. Evesham.
- 1922. Viehoff, Herman Crowther, M.R.C.S., L.R.C.P.Lond., 48, Moor Lane, Great Crosby, Lancs.
- 1894. Vincent, William James N., C.B.E., M.B., B.S.Durh., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, South Yorkshire Asylum, Wadsley, nr. Sheffield. (Lect. on Psychiat., Univ. of Sheffield.)
- Wadsworth, George Reginald, M.B., B.Ch.Belf., Assistant Medical 1023. Officer, County Mental Hospital, Lancaster.
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- Walker, Robert Clive, M.D., Ch.B.Edin., Deputy Medical Superin-IQIA. tendent, West Riding Asylum, Menston, nr. Leeds. .
- Walker, William Henry, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., "Rydal," 1923. West Crescent, Darlington, Yorks.
- Wallace, John Andrew Leslie, M.D., Ch.B.Edin., M.P.C., J.P., Mental 1908. Hospital, Callan Park, Sydney, N.S.W.
- Wallace, Vivian, L.R.C.P.&S.Irel., D.P.H., Ballinakill, Multyfarnham, co. Westmeath. 1912.
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- 1889. Warnock, John, C.M.G., B.Sc., M.D., C.M.Edin., The Limes, 181, London Road, Twickenham.
- Waterston, Jane Elizabeth, M.D.Brux., M.R.C.P.Irel., L.R.C.S.Edin., 1895. M.P.C., 85, Parliament Street, Cape Town, South Africa.
- Watson, Douglas Chalmers, M.D., F.R.C.P.Edin., Physician, Royal 1922.
- Infirmary, Edinburgh; 11, Walker Street, Edinburgh.
  Watson, George Alfred, M.B., C.M.Edin., M.P.C., Pathologist to the
  Lancashire County Mental Hospitals; Rainhill Cottage, Rainhill, 1891. Liverpool.
- Watson, Hugh Ferguson, M.D., Ch.B.Glasg., L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., F.R.S.Edin., D.P.H., Deputy Commissioner, General Board of Control for Scotland, 25, Palmerston Place, Edinburgh; Northcote, Edinburgh Road, Perth. 1008.
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- Webber, Leonard Mortis, M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer, Surrey County Mental Hospital, Netherne, Coulsdon.
- Webster, William Leckie, M.B., Ch.B.Edin., Major R.A.M.C., "D" 1922. Block, Royal Victoria Hospital, Netley, Hants.

- Westrupp, Joseph Perceval, M.R.C.S., L.R.C.P.Lond., Medical Officer, The Old Manor, Salisbury.
- White, Edward Barton Cartwright, M.R.C.S., L.R.C.P.Lond., Medical 1911. Superintendent, City Mental Hospital, Fishponds, Bristol. (Lect. on Ment. Dis., Univ. of Bristol.)
- White, Ernest William, C.B.E., M.B., M.R.C.P., M.R.C.S., L.S.A.Lond., 1884. Betley House, near Shrewsbury. (Hon. Sec. South-Eastern Division, 1897-1900.) (Chairman Parliamentary Committee, 1904-7.) (PRESIDENT 1903-4.)
- Whitelaw, William, M.B., B.Ch.Glasg., Director Western Asylums 1021. Research Institute; 3, Talbot Terrace, Scotstounhill, Renfrewshire.
- Whittington, Richard, M.A., M.D.Oxon., M.R.C.S., L.R.C.P.Lond., 1, Eaton Gardens, Hove, Sussex. 1905.
- Whitwell, James Richard, M.B., C.M.Edin., 66, York Mansions, Batter-1889. sea Park, S.W. 11.
- Wilkins, William Douglas, M.B., Ch.B. Vict., M.R.C.S., L.R.C.P.Lond., 1913. D.P.M., Senior Assistant Medical Officer, Stafford County Mental Hospital, Cheddleton, nr. Leek.
- Wilkinson, Harry Bacon, M.R.C.S., L.R.C.P.Lond., Deputy Medical 1900. Superintendent, Plymouth Mental Hospital, Blackadon, Ivybridge, South Devon.
- 1887. Will, John Kennedy, M.A., M.D., C.M.Aberd., M.P.C., Chesterfield, 214, Anerley Road, S.E. 20.
- Williams, Edward Lincoln, M.R.C.S., L.R.C.P.Lond., Newlands House, 1925. Tooting Bec Common, S.W. 17.
- Williams, David John, M.R.C.S., L.R.C.P.Lond., Medical Superinten-1005. dent, The Asylum, Kingston, Jamaica.
- Williams, Rhodri Gwyn, M.R.C.S., L.R.C.P.Lond., Assistant Medical 1925. Officer, London County Mental Hospital, Bexley, Kent.
- Williamson, David Hardie, M.B., Ch.B.Edin., Assistant Medical Officer, 1922. Woodilee Mental Hospital, Lenzie.
- Williamson, Marguerite, M.B., Ch.B.Glasg., D.P.M., The Ochil Hills 1016. Sanatorium, Milnathort, Kinross-shire.
  Wilson, Alban, M.R.C.S., L.R.C.P.Lond., D.P.M., Deputy Medical
- 1923. Superintendent, Knowle Mental Hospital, Fareham, Hants.
- Wilson, Ambrose Cyril, M.R.C.S., L.R.C.P.Lond., Neurological 1922. Specialist, Ministry of Pensions; 27, Nottingham Place, London,
- Wilson, Fred, M.B., Ch.B.Aberd., Assistant Medical Superintendent, 1922. Central Mental Hospital, Tanjong Rambutan, Federated Malay States.
- Wilson, Harriette Appleby, M.B., Ch.B.Leeds, D.P.M., Assistant Medical Officer, West Riding Mental Hospital, Wakefield. 1925.
- Wilson, Isabel Grace Hood, M.B., Ch.B.Edin., Assistant Medical 1923. Officer, Essex County Mental Hospital, Severalls, Colchester.
- 1920. Wilson, James Leitch, M.B., Ch.B.Edin., D.P.M., 235, Leytonstone Road, Stratford, E. 15.
- 1899. Wolseley-Lewis, Herbert, M.D.Brux., F.R.C.S.Eng., L.R.C.P.Lond., Medical Superintendent, Kent County Mental Hospital, Barming Heath, Maidstone. (Secretary Parliamentary Committee, 1907-12; Chairman, 1912-21.)
- Wood, Bertram William Francis, M.B., B.S.Leeds, West African Medical Staff; c/o P.O., Lagos, South Province, Nigeria. 1021.
- Wood, T. Outterson, M.D.Durh., M.R.C.P.Lond., F.R.C.P., F.R.C.S. 1869. Edin., "Lodore," Chelston Road, Torquay. (PRESIDENT, 1905-6.)
- Woods, James Cowan, B.A.R.U.I., M.D., B.S., M.R.C.S., L.R.C.P.Lond., 1912. 45, Weymouth Street, W. 1. (Lect. on Ment. Dis., St. George's Hosp. and London Hosp.)
- Woods, John Francis, M.D.Durh., M.R.C.S., L.S.A.Lond., 7, Harley 1885. Street, Cavendish Square, London, W. r.
- Wootton, John Charles, M.C., M.R.C.S., L.R.C.P.Lond., Medical 1012. Superintendent, Haydock Lodge, Newton-le-Willows, Lancs.

- Wootton, Leonard Henry, M.C., B.Sc., M.B., B.S., M.R.C.S., L.R.C.P. 1922. Lond., D.P.M., Medical Superintendent, Ministry of Pensions Hospital, Ewell, Surrey.
- Worth, Reginald, O.B.E., M.B., B.S.Durh., M.R.C.S., L.R.C.P.Lond., 1900. Medical Superintendent, Springfield Mental Hospital, nr. Tooting, S.W. 17. (General Secretary since 1919.)
- Wright, Maurice Beresford, O.B.E., M.D., C.M.Edin., 86, Brook 1917. Street, London, W. 1.
- Yellowlees, David, M.B., Ch.B.Glasg., 5, St. James Terrace, Glasgow, W. Yellowlees, Henry, O.B.E., M.D., Ch.B., F.R.F.P.S.Glasg., Medical Superintendent, The Retreat, York. 1921. 1914.

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- Chuckerbutty, Sites Chunder, L.R.C.P. &S. Edin., L.R.F.P.S. Glasg., 1922. Major I.M.S., Medical Superintendent, European Mental Hospital, Kanki (Ranchi), India; c/o Messrs. Grindlay & Co., 11, Hastings Street, Calcutta, India.
- Hay, J. F. S., M.B., C.M.Aberd., J.P., Inspector-General of Asylums 1890. for New Zealand, Government Buildings, Wellington, New Zealand.
- 1882. Hill, H. Gardiner, M.R.C.S., L.S.A.Lond., Pentillie, Leopold Road,
- Wimbledon Park, London, S.W. 19. Kough, Edward Fitzadam, B.A., M.B., B.Ch.Dubl., c/o F. S. Bate, 1003. Esq., Bushey Wood Road, Totley Rise, Sheffield.
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- Reardon, Arthur Francis, L.M.S.S.A.Lond., Medical Superintendent, County Mental Hospital, Cambridge.
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- 1002. Lond., County Mental Hospital, Prestwich, Manchester.
- Sinclair, Eric, M.D., C.M.Glasg., Inspector-General of Insane, Richmond 1888. Terrace, Domain, Sydney, N.S.W.
- 1881. Tuke, Charles Molesworth, M.R.C.S.Eng., Chiswick House, Chiswick, W. 4.

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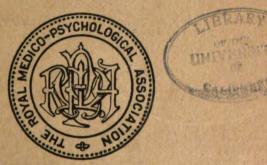
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Published Quarterly, price Seven Shillings and Sixpence net; or Thirty Shillings per annum net. The following Mental Hospital Reports for 1924-25 have been received:

Aberdeen City and District.

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Also the following Reports and Reprints:

Incorporated Lancashire and Cheshire Society for the Permanently

Feeble minded, 26th Report, 1925. Victoria Hospital for the Insane, Report for 1924.

The Smithsonian Institution, Annual Report for 1923.

Diabetes and its Treatment by Means of Physical Agents, by Dr. Joseph

The Intensive Radiotherapy of Cancer, idem.

Mentality and Anthropometrical Tests, by Dr. A. MacDonald.

Perspective in "Relation to X-ray Interpretation," by Dr. W. Cotton.

#### Books received for review:

Some Aspects of Mental Hygiene: Addresses by Drs. Williams, Macfie,

Campbell, Myerson and others.

Essentials of Psychiatry, by Dr. George W. Henry.

An Introduction to Objective Psycho-Pathology, by Dr. G. V. Hamilton.

Psychological Healing, by Dr. Pierre Janet. La Melancolie, Clinique et Therapeutique, by Dr. R. Benon.

A Clinical Handbook of Mental Diseases, by Dr. W. S. Jagoe Shaw.

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Vol. LXXII.

## Part I.—Original Articles.

On Endogenous and Exogenous Factors in Character Formation. By George A. Auden, M.D., M.A., F.R.C.P., D.P.H., School Medical Officer, City of Birmingham.

In his book on Psychological Principles the late Prof. James Ward defines "character" as "nothing but Nature modified by circumstance" (1). Apart, however, from the fact that much depends upon the meaning which we attach to the terms here employed, this generalization raises many questions which are worthy of consideration, and a discussion of its validity is not without interest. Moreover, the recent advances in our understanding of physiological processes and the changes in our psychological concepts raise the question of the possibility of bringing these into some sort of co-relation. In any discussion of the problem of the social relationship of the individual to the other members of his community there is no term which is in more frequent use than "character"; but just as a current coin by constant use loses all the distinctive design and lettering, so, too, words which are often on our lips tend to lose the meaning which was originally attached to them, and to acquire a new connotation very different from that which they first possessed. This is true of the term "character," and in this case the above metaphor is peculiarly applicable, for it will be remembered that it originally served to express the impression upon the malleable metal produced by the force imparted to the die when struck. It thus implies the two elements which enter into the making of a coin, i.e., the force which moulds, and the nature of the material which is moulded. Applied to human personality it ought to retain this two-fold implication, for the mode in which the individual reacts to that stress of external environment which forms the social mill, "wherein we rub each other's angles down," is largely determined by his somatic constitution, which is determined by his individual ancestry, and by the adequate functioning of his bodily processes. The recognition of this fact in the LXXII.

past gave rise to the Galenic doctrine of the temperaments, which still is enshrined in our language in the familiar terms "sanguine, melancholic, choleric and phlegmatic." Hoffding writes thus: "As a background given from the beginning it determines the mode in which all experiences are received by the individual, and consequently the mode in which the individual reacts upon the external world "(2)......

Character thus implies an inner unity of stability and consistence, and in proportion as this essential stability is lacking, an unstable quality will be imparted to the resulting reactions. But this degree of stability is dependent upon factors still deeper than inherent disposition and environment, upon the relative values of which it is of little use to speculate, for the two are inseparable components in character-formation, like two chemicals dissolved in one solvent. The often misleading catch-phrase, "Nature versus nurture," implies an antithesis which is not altogether true. More near to truth, and much more useful in its application, is the broad differentiation into endogenous and exogenous factors, i.e., those which are the result of conditions which are innate or inherent in the particular individual, and those which are the result of his circumstances and surroundings.

In the course of his development man has become, as Aristotle pointed out, a social animal(3), and the struggle for existence has shifted more and more from the mere pursuit of his biological necessities to the adjustment of his social relationships. Hence the endogenous factors are in reality biological, while the exogenous are the result of the pressure of the community of which he is a member, and are therefore essentially social. Looked at from this point of view, conduct must be regarded as a socio-biological problem.

The recent additions to our knowledge concerning the activities of the ductless glands have led us to regard their proper functioning not only as the keynote of the organic processes of growth and metabolism, but also as the directing agency of those affective reactions which are associated with every stimulus reaching us from the world outside ourselves, and tend towards action appropriate to the situation. Failure of one or other of these directing agents will result in a corresponding failure in completeness of adjustment. But as the second function of the endocrine glands is the regulation of somatic growth, it is to be expected *d priori* that there will be found a close association between the bodily conformation and the emotional attitude or temperament, and that a disturbance of the glandular activity will reveal itself both in somatic changes and in alterations in the emotional attitude of the individual. This *d priori* 

expectation is proved to be true in experience, for the abnormal forms of bodily growth known as acromegaly and cretinism, for example—conditions in which we have indisputable evidence of a lack of balance in the endocrine secretions—are but the extreme ends in a scale of dysplastic growth in which there are numerous intervening and less clearly defined degrees. The bodily condition of each is widely different, and each exhibits a specific type of mental disposition and temperament.

That there is an intimate relationship between certain types of bodily conformations and certain mental traits and dispositions is an observation to which everyday experience as well as countless characters in romance bear witness. Don Quixote, the lean and lanky idealist, is the opposite of Sancho Panza, the jovial exponent of animal spirits. Cassius, of lean and hungry mien, who—

"Looks . . . quite through the deeds of men. He loves no plays, he hears no music; Seldom he smiles" (4),

stands in marked contrast with Falstaff, whose rotundity bespeaks the bon-vivant. Like all creations of the true artist, these character sketches are neither caricatures nor fancy pictures, but are the reflection of human experience, and have their counterpart in the life of reality, for they betoken opposite poles of the characters of men. So clearly may these types be differentiated that amongst German writers the "Quixote-typus" and the "Sancho-typus" have been used to designate the two opposite combinations of bodily and mental characteristics.

This theory of types has recently been elaborated by Kretschmer, who, writing primarily as a psychiatrist, believes that he can distinguish three main types of bodily constitution, viz., the athletic, the asthenic, and the pyknish,\* and further that there is a high degree of correspondence between these somatic types and the form of insanity exhibited by each. Thus, according to this author, there appears to exist a clear biological association ("eine deutliche

\* Körperbau und Charakter, Berlin, 1921. (These bodily types can be readily recognized, but their characteristics can be summarized as follows—Asthenic: Thin and under-developed, with narrow shoulders and poorly developed limbs, long flat narrow chest on which the ribs show clearly, skin with little subcutaneous fat, belly flat without fatty deposit. ATHLETIC: Powerfully built with hypertrophic musculature, showing the muscles in high relief. Collar-bone thick and strong. Hands and feet large, and sometimes approaching an acromegalous condition. Skin of good consistence and elasticity. Medium deposit of fat on the trunk. Pyknish: Short and thick-set, with a tendency to the deposit of fat on the body and belly, with somewhat slender shoulders and moderately developed limbs. Thick neck running up to the chin. The term, which is perhaps not very well chosen, is derived from the Greek adjective πύκνος, denoting thickness, and is applied, for example, by Homer to a flight of arrows. However, it serves its purpose as well as any other.)

biologische Affinität") between the pyknish body type and manicdepression, whereas the athletic and the asthenic body types exhibit a corresponding tendency to schizophrenia. But, further, just as there is an endless variety of intermediate physical types, so too the outline between the various temperamental attitudes to the environment is blurred and shows every gradation between mental health and morbidity. Kretschmer believes that we can distinguish in these gradations certain distinctive types—the schizoid and the cycloid, according to the orientation towards their social surroundings. This is not altogether new, for after all, the "extrovert" and "introvert" of Jung are but little more than descriptive titles which denote the ends of the scale of temperaments, and Jung has found himself committed to a considerable degree of further elaboration of sub-types and combinations. The introvert is ego-centric, introspective and reserved, and, setting a paramount value upon his subjective psychological processes, is apt to doubt the value of his own achievements, and thus to find it difficult to face the problems of life. The extrovert, on the other hand, has little self-consciousness, and values external things and the energies that they evoke. He feels "the rapture of pursuing," and-

"At noonday in the bustle of man's worktime Greets the unseen with a cheer."

Lazar, Psychologist to the University Clinic and Children's Court in Vienna, has evolved a scheme of classification of older children and adolescents which is decidedly useful in assessing the degree of physical development in relation to conduct:

The third group in the series represents the normal, while the two upper groups represent degrees of under-development and the last a physical and psychical precocity. He has, moreover, drawn attention to the existence of two special types in which he finds a characteristic bodily conformation associated with special antisocial tendencies.

The first of these has received in Germany and Austria the title "the Kobbold type," from their fancied likeness to those mythical goblins which have played so large a part in Teutonic folklore(5). With short, thick-set, muscular bodies, large thick-boned skulls and powerful jaws (one child of this type told me that he "could eat wood"), these boys—for the type is rare amongst girls—show, it is stated, a marked proclivity towards dissocial actions. The intelligence is not greatly reduced, but they usually show one or

more somatic stigmata of degeneration, such as secondary vortices of hair, reduced sensibility to pain, etc. According to Lazar, this type represents the most pronounced and the most intractable of morally deficient youth ("Mit dieser Bezeichnung ist vielleicht das ganze Wesen des genuinen moralischen Defektes am starkesten characterisiert") (6).

The other physical type, which is the female counterpart of the Kobbold, with equally characteristic but totally distinct bodily conformation, is the so-called "steatic type" (7). This type is said to be frequently found amongst prostitutes and women of the most degraded class. Of a lymphatic habit and a marked tendency to fatness, with thick coarse greasy skin and smooth hair that obstinately refuses to lie or to obey the brush, and is generally towselled and unkempt, these women are incurably lazy and incapable of any sustained work. The indolence and the strongly pronounced sexual proclivities which characterize this type almost inevitably bring them to prostitution as the easiest means of livelihood. Their mental attitude in general is negativistic and dissocial. They are foul-mouthed, liars, vain, and with a predilection for display and ornament, and they are the despair of every social reformer who tries to help them. These women often show neuropathic symptoms. and it is possible that endocrine defect underlies the condition. As a rule, however, such individuals have a bad family history, such as prostitution, vice and debauchery in the parents. Thus both endogenous and exogenous causes are at work on the production of this type. It is not unworthy of note that this steatic type corresponds somewhat closely with that feminine type regarded with favour by the sensual Oriental, whose women are a mere instrument for the gratification of passion. Though there is no doubt as to the existence of these physical types, it must not, of course, be argued that those individuals who belong to them are inevitably predestined for a career of unworthy citizenship. a determinism would be entirely unwarranted. These combinations are but signal-posts which point to possible dangers and difficulties ahead. The fact, however, upon which emphasis may be laid is that certain definite and well-recognized physical characteristics are frequently found in association with certain temperamental types, and that these tend to react in a characteristic manner to the stresses produced by the social environment. This point is further illustrated by the fact that while many persons of undoubted mental inferiority differ in no way in appearance from their normal fellows, others show those physical signs which are known as "stigmata of degeneration"—monstrous heads, ill-shaped and illplaced ears, coarse and irregular features and the like. Other

physical types, such as Mongols, microcephalics, amaurotic idiots and cretins, offer still more marked evidence of a failure in the normal process of mental and physical development.

The association of clearly defined physical characters which are true to type, combined with a reduction in mental capacity, points to the existence of biological factors which determine both the specific somatic characters as well as the psychical reactions of each of the above-named morbid conditions. The question which arises is whether there is behind these biological processes any single ultimate causative factor, or whether they may be the result of the interaction of a number of factors. Light may perhaps be thrown upon this question by the recent discovery of the existence in certain orders of the animal kingdom, notably amongst the Insecta, of lethal factors which tend to the destruction of the stocks in which they appear. These lethal factors, which have been chiefly investigated in the fruit-fly (Drosophila) and the blow-fly (Calliphora), result in the failure of the development of a proportion of the progeny, and so to the extermination of the stock thus affected. Gates (8) has suggested that similar lethal factors may make their appearance in man, and that the existence of such abnormalities as Mongolism and amaurotic idiocy may be the result of their presence.

Little and Gibbons (9) have considered the problem of such factors in human inheritance in connection with sex-linked defects as hæmophilia and pseudohypertrophic paralysis, but it is clear that the application of the term "lethal" to such factors as may underlie these conditions is misleading, for the term should be confined to those factors which lead to the production of non-viable offspring. Though the causal factors in hæmophilia and pseudohypertrophic paralysis and hereditary ataxia come into action before the individual has reached maturity, and thus tend to reduce the chances of their direct transmission to another generation, they cannot be said to be lethal in the same sense as are the factors which are in operation in Drosophila. Such factors as tend to the elimination of unsound stock may be better described as "phthersigenic,"\* i.e., factors which are destructive of the individual stock in which they make their appearance. It is, of course, obvious that no close analogy can be drawn from phenomena which occur in the reproductions of insects which may be applied to man with his single births and slow maturity, but it is stated that factors causing the

<sup>\*</sup> This epithet is that applied by Æschylus to the Furies, destructive to the race of mankind:

ω μεγάλαι χοι καὶ φθερσιγενεῖς Κῆρες 'Βρινύες.—Sept. cont. Thebas, 1054.

non-viability of offspring have been observed in mice. A comparable lethal factor has been noted in connection with yellow colour in cats. Gates suggests that "the conception of lethal factors is destined to play an important part in the explanation of many phenomena of reproduction in man" (10), and to furnish an explanation of some of the cases of sterile marriages.

Nettleship (Bowman Lecture, 1909) has collected a large series of genealogical trees which show that there are a number of diseases which appear in successive generations, some of which show a clear sex-linkage with maleness, e.g., colour-blindness, lenticular disease of the lens, Leber's disease of the optic nerve, etc. Other morbid conditions are familial, but not hereditary, e.g., Friedreich's ataxia, progressive lenticular degeneration, etc. These facts may be correlated with the observation of Garrod that certain rare perversions of metabolism, alcaptonuria, cystinuria and pentosuria are much more frequent in males than females. On the other hand, the abnormality known as congenital dislocation of the hip-joints, which tends to be familial and to alternate with congenital dyscrasias, is closely associated with femaleness(11).

Apart from this problem of sex-linkage, there are certain phenomena which appear to support the application of the theory of lethal factors in explanation of the occurrence of certain types of human abnormality. For example, the characteristic association of Mongolism with an advanced age in one or both parents, or the frequent position of the child at the end of a large family, when the reproductive powers are waning, seem to suggest the operation of factors tending to the destruction of the stock. It is, of course, true that a certain proportion of Mongolian births occur when the parents are young and apparently healthy, and that Mongol children are, after all, the exception, even with parents of more than mature years(12). These facts do not, however, invalidate the theory, for we are at present totally ignorant of the conditions under which phthersigenic factors may be activated. It is indeed possible that the interaction of more than one factor is necessary, just as extrinsic and intrinsic factors appear necessary for the growth of cancer. Another fact of some interest in connection with the appearance of Mongol children is that they are infrequent in the poorest stratum of society, in which the families are often large, but seem to be the prerogative of the more educated families which have risen, or are rising in the social scale. Further, the bodily defects, e.g., congenital heart disease, and the specific physical characters of the condition which are so true to type, the deficient development of the generative organs, and the liability to death from intercurrent disease, so that Mongols but rarely and only under the most favourable circumstances reach adult life, all appear to fall into line with this postulated existence of "phthersigenic" factors. frequent occurrence of multiple cases of microcephalic idiocy in the same family appears to point to the existence of some familial factor which is tending to the elimination of the stock, as also does amaurotic family idiocy. In these forms of a congenital combination of mental and physical defect, we have individuals who, by virtue of these deficiencies, are incapable of reproduction, and, apart from the compassionate efforts of the community, are destined for an early death. They thus appear to represent a failure of the stock in which they occur. It is a noteworthy fact in this connection that, although the so-called "stigmata of degeneration" do not necessarily connote a condition of intellectual inferiority in the individual who exhibits them, yet they have a clear and indubitable association with certain types of mental defect, and that when there is a concurrence of several of these physical abnormalities, there is a greater probability of the co-existence of mental defect. In fact, the combination of physical stigmata with mental defect or their absence may be the differentiating feature between two distinct genera of mental deficiency, which I have elsewhere termed the devolutive and the evolutive respectively(13).

But a still stronger argument in favour of the existence of phthersigenic factors is afforded by the phenomenon of "antedating" or "anticipation" exhibited by the occurrence of insanity in successive generations. Thus Mott has shown that "there is a signal tendency in the insane offspring of insane parents for the insanity to occur at an earlier age, and in a more intense form in a large proportion of cases . . . nearly 50 per cent. of the insane offspring had their first attack of insanity at or before the age of 25 years." "Not infrequently the stock dies out by the inborn tendency to insanity manifesting itself in the form of congenital imbecility, or in the insanity of adolescence "(14). The trend towards degeneration may also be exhibited not only by insanity, but by the presence of nervous irritability, neurasthenia and the neurotic temperament shown in a lack of sound judgment or of moral control. Insanity is, however, not a psychological but a legal term, which implies the application of certain criteria to conduct, irrespective of the causal factors of which the conduct is the result. It is highly probable, moreover, that mental deficiency is not a unitary condition, but that it includes several conditions, ætiologically distinct, but grouped together because they are associated with similar manifestations of conduct. It is this familial interassociation of psychopathic, neuropathic and mentally deficient states which proves the fallacy of the eugenist standpoint, which would, by sterilization and segregation, forestall

the slow eliminating process of a natural failure of the stock. It may be argued that statistics show an average larger number of births in degenerate and mentally inefficient stock. This is, however, often compensated by an increased mortality in the offspring. Doubtless some of this mortality is due to ignorance, indifference, venereal disease, and that degradation of environment which so generally accompanies mental inefficiency, but it is likely that a reduced viability is also in operation in the reduction of the number of the stock who reach adult life.

As we have seen, certain abnormal types of bodily configuration are the outcome of the abnormal functioning of one or more of the endocrine glands. We have, moreover, evidence that these also play a very important part in the constitution of personality, and in the emotive reactions to the environment. Even if we do not accept the extreme view of those who would classify the whole community in terms of the activity of the different members of the endocrine hierarchy(15), yet we may agree with Kretschmer that there exists a correlation between somatic configuration and psychic type, which determines to a large extent the form of psychoses exhibited by each. If one or another of the endocrine glands fails to maintain its position in the hierarchy a perverted metabolism follows, which shows itself both as changes in the normal somatic growth or functions and in the emotive reactions to the environment. of somatic change may be taken as giving a measure of the glandular failure, and may vary from the presence of one or more of the so-called "stigmata of degeneration" down to the extreme forms of abnormal growth already mentioned.

The conclusion to which these facts seem to point is that the coming failure of a stock first makes itself felt in the balance and functioning of the endocrine glands, or that their waning activity is the first step in the process of degeneration. But, it will be argued, the dying out of a family is often due to causes of a social character, such as the failure of male issue, or the fact that a number of its members have refrained from marriage. these causes are, however, capable of a biological explanation. we accept, as appears probable, the existence of sex-linked lethal factors which render the individual possessing them non-viable, these may eliminate the males in certain families. Thus a lethal factor may in fact be invoked not only as the cause of sterile marriages, as Gates has suggested, but also to explain the production of a large proportion of daughters or the absence of male progeny. The failure to marry may also be the outcome of a lessened endocrine activity, leading to the absence or blunting of the normal sexual impulse.

Galton has drawn attention in his investigations into hereditary genius to the decline or extinction of families as the result of sterility, or a comparative infertility, and the danger to the continuance of the stock which may follow marriage with heiresses (whose inheritance connotes a failure of male issue) has been discussed at some length by Whetham. The figures given by Galton certainly seem to support the thesis put forward by Gates that some lethal factor is at work: "Among 200 wives of peers Galton found that 100 heiresses produced 208 sons and 206 daughters, i.e., 414 children in all, while 100 who were not heiresses had 336 sons and 284 daughters, a total of 620. One-fifth of the heiresses had no male children" (18).

So much for the biological factors which play a part in characterformation; but there are other factors which must be taken into consideration. The first of these is the degree of general intellectual capacity possessed by the individual whereby the power of reasoning and of forming judgments is compassed. It is by the possession of this capacity that he can apprehend the social and ethical demands made upon him, and whereby he is able to control his primitive instincts. It is that quality of mind which Aristotle (17) described as practical wisdom (φρόνησις), whereby "the individual brings his past experience, not only to his present aid, but to enable him to shape his course in the future. . . . It is by wisdom that he is enabled to cope successfully with unaccustomed circumstances, to make plans, to take long views; in short so to regulate, adjust, and shape his conduct in accordance with present and possible future environment as to merit, if he does not actually achieve, success in life"(18). But general intellectual capacity may itself be described as a function of two distinct factors, viz., general intelligence, which is innate and dependent upon the working of the brain as a whole, and secondly upon the capacities to make certain specific mental acquisitions, such as reading, calculation, These latter capacities depend upon the proper functioning of cellular elements of the brain, which are apparently more or lessfocal and localized in the cortex. Evidence in favour of the "twofactor" theory of general intellectual capacity is afforded by the marked difference in the type of curve of distribution shown by the two components. General intelligence, by whatever measure it is gauged, is found to be distributed along a normal curve of frequency, although certain intercurrent factors disturb this distribution in the lower ranges of intelligence. It may thus be regarded as a phenomenon of the same physical order as the distribution of bodily height. The specific educational capacities, which are of much more recent phylogenetic development, are more irregularly scattered, and their distribution gives a curve of a skew character.

Moreover, that there is a functional independence among the various special capacities themselves is proved both by the sporadic character of their distribution and the anomalies in these special capacities which are found from time to time. Thus the condition known as word-blindness (whether congenital or acquired as the result of disease or injury to a localized area of the brain), in which there is an inability to retain in memory the meaning of letter or word-symbols, does not extend to the recognition of numerals, and though the subjects of this defect cannot read or write to dictation, they can, as a rule, calculate with ease and accuracy. But this defect has also two other characteristics which offer striking evidence of their endogenous character. It shows not only a marked tendency to a hereditary transmission, but also a very great preponderance in males. These characteristics clearly bring the condition into the same category as the other sex-linked morbid conditions mentioned above. The precocious capacity for calculation shows an analogous sex-linkage, for this precocity for calculation is almost, if not entirely, confined to boys(19). This is also true of the "Wunderkinder" musical prodigies and chess-champions.

This "two-factor theory," which owes its title to de Sanctis, has received mathematical confirmation from Spearman(20), who has recently expressed it in the form of the theorem: "Every different ability of any person can be resolved into two factors, of which the one is always the same, but the other always independent."

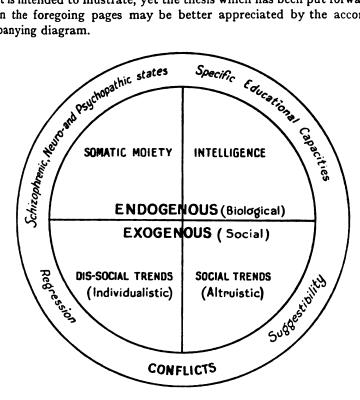
General intellectual capacity, therefore, may be described as a function of two variables, the transmission of which from parents to offspring, and the sex-linkage, betoken their endogenous nature.

Man is, however, as has been already pointed out, a social animal, and if the cohesion and compactness of the society in which he moves, and upon the integrity of which his safety depends, is to be preserved. he must subordinate his own individual interests and desires to the demands of the whole community. In other words, his individualist outlook must be sublimated into one of altruism. in the earliest years of his life the child is essentially individualist. He feels himself the centre of a universe of his own, round which the various planets of his little solar system revolve. But, as he grows, the experience of reality ere long teaches him that there are other solar systems besides his own, the orbits of whose planets cross and re-cross his own. From the first days of his life the child is subjected to a ceaseless stream of suggestions of social import from his immediate environment, which stamp upon the malleable material of his innate mental make-up an impression which grows ever stronger with his increasing years. It is this suggestibility which gives to environment its supreme significance. This fact is well expressed by Barker (21): "As a child grows, the community in which he lives pours itself into his being in the language he learns and the social atmosphere he breathes, so that the content of his being implies in its every fibre relations of community." There thus arises in each individual in a normal social environment a predisposition towards conduct that is in conformity with the general good of the community as a whole, which tends to the inhibition of actions which are considered to be inimical to its interests or contrary to the tenets of his fellows. Rivers (22) has put forward the theory that the protopathic and epicritic forms of sensibility to stimuli from the outer world represent two distinct stages in the evolution of the nervous system, and that "the instincts associated with the needs of the individual and with the early preservation of the race are mainly of the protopathic kind, whereas the epicritic group of instincts first appeared with the development of gregarious life." He regarded suggestion as essentially a process of the unconscious, "whereby the mind of one member of a group of animals or human beings acts upon another or others unwittingly to produce in both or all a common content, or a content so similar that both or all will act with complete harmony towards some common end "(23).

The social demands of the group-mind, to use MacDougall's phrase, are in the main an epicritic form of mental activity, and are, therefore, subsequent to the primitive trends towards the satisfaction of the individual ends and desires. This is true both phylogenetically and ontogenetically, and there is, in fact, in every one of us an ever-present conflict between this primitive or protopathic trend towards individualism and that towards social or altruistic behaviour. The relative power of the pull in either direction will depend to a large extent upon the nature of the suggestions which pour in upon us from our environment. But here the general intellectual capacity comes into play, for it is clear that the epicritic capacity for forming judgments and for reason, which is dependent upon the degree of general intellectual capacity, will be able to influence either by augmentation or inhibition the social or dissocial trends. Thus a person who is essentially individualistic and dis-social may by the exercise of reason and judgment be able to recognize that it is in his own interest to inhibit his natural tendencies, and to conform to the social demands made upon him. The converse is also true. In the same way the susceptibility to emotional stress which is associated with the somatic constitution may profoundly modify the reactions to the exogenous social or dis-social elements of the environment, while, on the other hand, the weakening of the emotional activities and the reduced capacity

for forming judgments, which are characteristic of a reduced general intellectual capacity, may allow the dis-social individualist trends to have freer play.

Although it is easy to read into a graphic representation more conciseness and symmetry than is warranted by the facts which it is intended to illustrate, yet the thesis which has been put forward in the foregoing pages may be better appreciated by the accompanying diagram.



Character is seen to have a fourfold basis, which may be represented by the four quadrants of a doubly bisected circle. The endogenous factors which comprise the influences which arise from the somatic constitution and the innate quality of the brain, upon the adequate working of which depends the general intellectual capacity, form the upper two segments. Both of these are qualities which may be described as biological in that they may be transmitted from parent to offspring. On the other hand, the exogenous or social factors, *i.e.*, the dis-social (or individualistic) trends and the social (altruistic) trends, are represented by the lower segments. These trends are essentially antagonistic, and the state of conflict which results between them will be heightened by the degree of

suggestibility inherent in the individual. If the conflict reaches a certain degree of intensity, a solution must be found which may show itself in the phenomenon of regression, dissociation, or some cognate mental state.

But associated with the somatic constitution are certain morbid conditions, neuropathic and psychopathic states, e.g., epilepsy, schizophrenia, etc.(24). These facts afford clear evidence of the close inter-relationship between what may be termed somatic inferiority and the conduct or behaviour. We cannot conceive of conduct otherwise than as an expression of mental processes and a manifestation of mental life; teleologically conduct may be considered as the attempt of the individual to meet the demands of his environment, and to mould that environment to serve his own ends. What those ends or conations are is largely determined by their affective tone, and this is dependent upon the susceptibility to emotional stress, which in turn bears a direct relationship to the degree of his suggestibility. That this is true is clearly seen in the behaviour in the hypnotic state. Here the suggestion must be acceptable to the ego, i.e., it must have a pleasurable affective tone before it will be received and acted upon. For example, a subject will chew a candle on the suggestion that it is a stick of chocolate, but will refuse to act upon the same suggestion if at the same time it is suggested that the candle is excrement.

The various elements above enumerated may be represented in the diagram as a continuous band forming the circumference and binding the whole into a compact unity.

The diagram incidentally indicates graphically how misleading is the antithesis between heredity and environment, for it will be seen that no line of demarcation can be drawn where one ends and the other begins. They form the warp and woof of the texture of personality. But there remains another question arising out of this differentiation of endogenous and exogenous factors in characterformation, viz., the process of recognition of the self as a personal entity and its identification with the objective body. This question is one of paramount importance.

In the earliest days of life there is little that can be termed consciousness, but only that mere awareness which the infant shares with the members of the lower Vertebrata. Awareness must necessarily precede consciousness, and until the myelination of his sensory paths is complete, more than this awareness is scarcely possible. The child is still in the protopathic stage of his development. Observations of the behaviour of an infant in the first few weeks of life seem to confirm the view that at this period the sensations perceived through the receptor organs are diffuse, unassociated,

and unintegrated. It would appear that the child becomes conscious of its body only as a part of the world outside itself, and that it is apprehended through the agency of that quality of projicience inherent in its receptor organs of sensation. Thus Parsons (25) states that photopic vision and colour appreciation are essentially epicritic in character. Prof. James Ward (26) puts forward the same view: "It is obvious," he writes, "that this presentation of self must first be developed somewhat before other presentations can be related to it . . . we begin with self simply as an object perceived or imagined, and end with the concept of that object—albeit greatly transfigured—as the object or 'myself,' that knows itself."

Again (p. 365), "As soon as definite perception begins, the body is distinguished as an extended thing from other bodies, and such organic sensations as can be localized are localized within it. At the same time, the actions of other bodies upon it are accompanied by pleasures and pains, while their action upon each other is not. The body also is the only thing directly set in motion through the reactions of these feelings. . . . It is thus not merely the type of occupied space and the centre from which all positions are reckoned, but it affords to us and to others an unfailing and everpresent double of the actually feeling and living self, to which all other things are external."

The apprehension of space, shape and distance, dependent as these are upon the integration of the various sense-impressions, cannot as yet have been achieved. In the words of Lloyd Morgan, the knowledge of the body as "minded" is primarily objective, and precedes that of conscious "minding." Both "minding" and what is "minded" are essentially perceptual in their nature. "What is minded in vision can only be so minded when the bodily instrument reaches a certain stage of evolution. . . . Reference to the external world can hardly be said to have begun, at any rate, must have been in quite an incipient stage, before the differentiation of distance-receptors had reached a comparatively high level "(27).

There is thus a primitive duality between the perceiving self and the body objectively perceived, which becomes, as it were, "a frame of reference" to the former.\*

<sup>\*</sup> Since the above was written, the view here expressed has been explicitly stated by Kardines (Mental Hygiene, viii, p. 233): "From the conative side, the child does not as yet recognize itself as an entity apart from anything in its environment. When it begins to appreciate that there are objects separated from itself by space, the self of the child begins to acquire definite limitations, and with it the consciousness of a constant and unchangeable unity. This larval consciousness cannot at first consist of more than the organization of painful and pleasurable qualities, and the first problem of adaptation begins to be the differentiation of endogenous from exogenous stimuli, the demarcation of the

Pari passu with the further elaboration and consequent integration of the nervous system, this primitive duality, though persistent, undergoes modification, and the objective moiety of the self becomes increasingly endowed with those properties and attributes of personality which the subjective self apprehends as appertaining to its being. It is from habitude and from that intimacy that is born of repeated experience that this "double" gradually loses its distinctness, and becomes merged in and identified with the corporeal self. It appears possible that the researches of Head into the mechanism whereby we are cognizant of the relative position of our limbs and body at any given time, may throw some light upon the means whereby the self as the subject of experience apprehends its relation to other selves which are the object of its experience.

Head\* shows that the function of the cerebral cortex is the integration of spatial relations. From his neurological investigations he has postulated the formation of a subjective and unconscious model or "schema" of the body and its limbs, whereby directive and purposive postural change is estimated and effected in relation to the previous position. "Every recognizable change in posture enters consciousness already charged with its relation to something that has gone before, and the final product is directly perceived postural change. For this combined standard, against which all subsequent changes in posture are estimated before they enter consciousness, we have proposed the word 'schema' a cortical lesion tends to destroy such schemata and so disturbs the certainty of spatial relations." Elsewhere he writes (loc. cit., p. 607): "In addition to its function as an organ of local attention the sensory cortex is the store-house of sense impressions. These may rise into consciousness as images, but more often, as in the case of spatial impressions, remain outside central consciousness. Here these form organized models of ourselves, which may be termed schemata." It is by means of the schemata thus formed that the individual is in a position to react appropriately to the environment. If, therefore, our sentient perception of ourselves in relation to our outer world springs from our primitive sensations and from the power, which seems to be developed pari passu with the development of the neopallium, of focusing our attention upon

self from the non-self, so to speak. While it appears to the individual with a fully developed consciousness a self-evident or immanent fact that the various parts of the body are integral parts of the body, this must be the result of a long synthesis. It is likely that when an infant is first able to appreciate objects as such, it regards its own members as parts of the outside world. The knowledge that its hand is a part of its own self is created only by a series of integrations, tactile and muscular, and an appreciation of movement or motion."

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those changes evoked by sensory impressions whereby we construct our conceptions of matter, space and time, then it is possible that our conceptions of personality in relation to other personalities may be a phenomenon of a similar order.

This suggestion appears to be implicit in the theory put forward by Thurstone(28), who regards consciousness as unfinished action, and defines desire as "an act in its early stage of definition," for action necessarily implies a precedent apprehension of the spatial relationship of the body and its parts, i.e., it connotes a schema of position. He writes: "Mental life can be thought of as action in the process of being formulated . . . the several cognitive categories can be interpreted as differing mainly and in a functional sense in the degree of the completion of the act (p. 51)." biological purpose of consciousness is to mediate action . every momentary mental state should be interpreted as an unfinished act with the overt interpretation of the act as a basis of interpretation" (p. 47). In this connection it is to be noted that endocrine activity plays an important part in the conative aspect of consciousness, for the hormones secreted by the glands set in motion the train of physiological phenomena and establish the necessary emotive state which are preparatory or adjuvant to action appropriate to the situation. The results of stimulation of the adrenal or sex-glands will illustrate this point. But this explanation may be carried still further back in the evolution of consciousness. In the lowest orders of the animal kingdom it is the distancereceptors which through their quality of projicience enable the organism to react to the environment by movements appropriate to the situation before the nocuous stimulus is in actual contact. and only then apprehended through the sensation of touch.

Teleologically, therefore, the distance-receptors have a higher protective value to the organism than the phylogenetically earlier and more protopathic sensations of smell and touch, and at the same time give to the external environment a clearer content and form. They thus allow a wider and more selective range of reaction. It is out of this apprehension of the environment that consciousness takes form, to which the proprioceptive field supplies the affective tone. Conative or directive movement is thus one of the prime elements of consciousness. It is in this sense that Sherrington (29) describes the brain as "that part of the central nervous system which is constructed or evolved upon the distance-receptors." With the emergence of epicritic sensibility and its "nicely calculated less or more" type of reaction and the building up of systems of unconditioned and conditioned reflexes, the range of consciousness is rendered clearer and more distinct step by step as we ascend the

scale of vertebrate development. Considered from this point of view, language belongs to the category of motor reactions, for it is a combination of gestures and the regulated movements of the glosso-laryngeal and respiratory muscles(30).

Moreover, language connotes the precedent choice of the appropriate sound-symbols to express the idea desired. These sound-symbols must then be arranged in the correct sequence before the vocal apparatus is set in motion, i.e., schemata compounded of past visual, auditory and glosso-kinæsthetic impressions are organized before intelligent speech is possible. Introspection or experience will prove the truth of this statement, for though in the use of the mother tongue or of a language the use of which has made its form completely familiar, this process is so unconscious as to partake of the character of a conditioned reflex, yet in the use of an unfamiliar language there is a conscious and often laborious arrangement of the different parts of speech in the sequence required by the individual language.

In the acquisition of the graphic form of language, viz., reading and writing, there is a similar integration of visual and motorschemata(81). But though language, which is essentially an epicritic acquisition, is thus to be regarded as a form of motor activity, yet from the point of view of the hearer it must also be considered from the cognitive side. In this sense it must be regarded as a stimulus perceived by the individual through a distance-receptor. and as such it partakes of the properties of other stimuli from the external environment which connote a reaction. The prime importance of language lies in the fact that it evokes emotive reactions—a power which appears to be due to the protopathic quality of suggestibility which plays so great a part both in the social or gregarious life and in the life of the individual. As Ward(82) puts it, language and especially the social intercourse which it promotes are "the main instruments in the formation of the concept which every intelligent being more or less distinctly forms of himself, M. or N. having such a character, tastes and convictions, such and such a history, and such and such an aim in life." The bearing which these facts have upon the question at issue is the evidence which they afford of the important part played by the motor elements in the genesis of consciousness. In fact, if Bergson's view is the true one, then the very essence of consciousness is a change and progression, and every state of consciousness stands related to that which preceded it in terms of motion(88). there must be a continuum which unites each successive change in consciousness, analogous to that which relates every posture to its precedent position. Self is thus, according to Bergson, "a

succession of states in line," in which the past enters into the present in an unending succession of psychical events. If, therefore, we extend the hypothesis of Head in relation to posture to the formation of a schema of the personality in its relation to the social community with which it is surrounded, we may find therein an explanation of many phases of conduct and behaviour which are difficult of interpretation. Out of the experience of living, man frames an ideal construction or schema of his individuality. Such an ideal construction must include a schema of an external world of matter, space and motion, in which his body has place, and in which the perceived occurrences within his body have place. Later. when reflective interpretations, founded upon epicritic data, are possible, he constructs a schema of a world of social import, in which other conscious beings have place, and to which those personal experiences which constitute his incipient schema of self have reference. The protopathic awareness to stimuli of his early days of life and the "all or none" reactions which result are necessarily teleological, for they have as their aim the pursuit of pleasurable sensations and the avoidance of pain. At this state the individual is, in the words of Lloyd Morgan, a "self of enjoyment." It is only with the epicritic development that there can be any conscious and selective choice, but the "pleasure-pain principle" persists, and the child remains egocentric, despite the increasing integration of his experience. He continues to endow his ideal construction with all the appropriate qualities which his ego-centric trend demands. But as the child grows and his experience enlarges, his "self of enjoyment" undergoes a change by his contact with reality and the "pleasure" principle becomes modified accordingly. As Freud puts it (84): "The ego learns that it must go without immediate satisfaction, learn to endure a degree of pain, and altogether forego certain sources of pleasure . . . it becomes 'reasonable,' is no longer controlled by the pleasure principle, but follows the reality principle." That element of consciousness of the personal self which has been termed the "ego-ideal" is, after all, but an organized model or schema of ourselves which each one of us builds up from our external relationships, constantly moulded, indeed, and changing under an ever-changing environment, and by that flowing stream of suggestion which our membership of a social

<sup>•</sup> Cf. Wildon Carr, A Theory of Monads, p. 125: "Consciousness consists of states only one of which is present; every present state of consciousness is separated by a distinct and definite outline from every remembered or anticipated state." Also p. 170: "The life of the mind, the mental process, consists in, and is sustained by, the continual reception of the yet unknown into the frame or organization of the already known." Is it not valid to look upon this 'frame,' which forms the basis of the continuity of personal experience, as the result of a schematization of the 'already known'?"

group supplies, but constructed out of that basis of primitive personality which we share with all humanity.\* The affective tone of our relations with the other members of the social group to which we belong depends upon the degree of coincidence between these relations and the ideal schema which we have constructed for ourselves, and the attributes with which, according to our temperamental constitution, we have endowed it. If the coincidence is complete and absolute, the "ego-ideal" is completely satisfied. If, however, there is a divergence between the two, no such complete satisfaction is possible. Just as our apprehension of change of position of ourselves in relation to the external world, or of objects in relation to one another, is ultimately dependent upon the unconsciously perceived range of muscular movements of the eye, which are referred to a schema of position, similarly it seems reasonable to suppose that the experiences of reality are referred to a schema of the ego. The ego-schema thus postulated results primarily from the integration of all the experiences of the self which are objectively and subjectively perceived. The ego-centric attitude, to include which the term "narcissism" has been somewhat unnecessarily extended, would appear to be the natural outcome of such an integration. This view seems to offer a simpler explanation than either that of Freud or of Jung.

This supposition of a schematization falls in with the hierarchy of mental levels formulated by Hughlings Jackson. range of protopathic behaviour consists of unconditioned responses to stimuli, and of primary behaviour unlearnt in the course of individual life. Above this level is that of secondary behaviour under conditioned response. Higher still in the hierarchy is tertiary procedure, "having as its criterion guidance of action in the light of a plan, and instances thereof mentally rehearsed in imagery prior to execution in act." Above this level is higher tertiary procedure with interpretation in addition to practical action as the end in All the levels above the primary level are epicritic, and may be correlated with the degree of adequate functioning of the This differentiation appears to have a direct bearing neopallium. upon the problem of mental deficiency, for the manifestations of the different grades of mental deficiency can be interpreted in terms of these hierarchical categories. Thus the lowest grade of idiot,

<sup>\*</sup> The suggestion put forward by Royce in his Gifford Lectures (*The World and the Individual*, vol. ii, p. 260, et seq.) that consciousness of self is ultimately dependent upon our social life, seems akin to this point of view. "In origin the empirical ego is secondary to our social experience. . . . While the permanent character of our organic sensations aids us in identifying the empirical ego, this character becomes of importance mainly because hereby we find ourselves always in a certain inwardly observable type of contrast to the whole of our social world."

who maintains little more than a vegetative existence, shows only a crude awareness of the pleasant or unpleasant tone of stimuli which reach his consciousness. He has not advanced beyond the protopathic level of primary behaviour. His responses to stimuli are largely without discrimination, and partake of an "all or none" character. In proportion as we ascend through the higher grades of idiocy, imbecility and feeble-mindedness, we find that the behaviour can be interpreted in terms of the higher levels of epicritic control. It is clear that below the above-mentioned tertiary levels of epicritic procedure no schematization of social relationships is possible, and the guidance of behaviour by reflective discrimination is therefore to a greater or less degree wanting.

If this concept of the building-up of an ego-schema in relation to the experiences of reality is accepted, it may perhaps be applicable in explanation, not only of certain phenomena of abnormal personality, but also of many forms of behaviour which run counter to the dictates, sanctions and inhibitions of an organized community, and are, therefore, designated misdemeanours. Looked at from this point of view, delinquency may be but the repercussion of the state of conflict which may arise between the ego-schema and the environmental circumstances in which it is placed—a conflict between the individualistic and the altruistic trends.

If the schema of personality is subjected to too great a strain its integration may break down. If we may adopt a somewhat mechanistic metaphor taken from cosmogony, the schema, if not sufficiently compacted or if subjected to a strain of sufficient intensity, may suffer disruption, with the resulting formation of double personalities comparable to twin stars, or satellite schemata may be formed which continue to revolve round the main personality like the satellites of a planet. Indeed, the metaphor may be carried still further, for the satellite schema may only be evident under certain conditions, just as the moon is only visible when certain physical conditions are fulfilled. Memory, whatever may be its precise mechanism, is one of the most important factors in producing the apprehension of personal identity, and any break in its continuity will tend to produce some alteration in the integration of the schema.\* If we accept Rivers's terminology, we may regard repression as a "witting" attempt to secure a harmony between

<sup>•</sup> On the importance of memory see Wildon Carr, op. cit., p. 157: "The fundamental fact in experience is memory . . . it is real existence and the basis of living activity. Conscious experience depends on memory as its condition." Cf. also Bergson (Huxley Lecture, 1911): "A consciousness that retained nothing of the past would be a consciousness that died and was reborn every instant, it would no longer be consciousness . . . all consciousness then is memory; all consciousness is a preservation and accumulation of the past in the present."

the self and those elements of experience which are not acceptable, while suppression secures the same end independently of volition by blotting the disharmony out of consciousness. By both the same end is served, viz., a break in the continuity of memory. In the latter case the disharmony still persists, but by the fact of its suppression can no longer be subjected to the criticism and judgment which consciousness allows. It is therefore free to take an independent course, and the threshold of suggestibility being lowered, it forms a nucleus round which other suppressions and suggestions may cluster to form constellations, and partial or complete dissociation is the result.

As is well recognized, one of the methods of solution of such a conflict, probably the most frequent, is that of regression, which is an attempt to bring the present social demands into harmony with a schematic presentation of a self of less developed type by a fantastic return to a period, generally that of childhood, at which such a conflict could not have arisen, i.e., to a period of psychical development in which the ego-schema was still that of a "self of enjoyment" untrammelled by the pressure of reality. In my personal experience of the examination of child or juvenile delinquents, this process of regression has appeared in many cases to be the real explanation, especially in cases of stealing. The immediate gratification of the desire to possess suggested by the sight of a desirable object makes a stronger affective appeal than does the reflective knowledge of possible punishment which may follow. Accordingly, the conflict between the desire of acquisition of the coveted object and the categorical imperative of society, "Thou shalt not steal," is resolved in a manner satisfactory to the ego by a return to a period of childhood when the dividing line between "tuum" and "meum" is unrecognized. When asked why he has taken a certain thing, the culprit will either give an explanation which is clearly a rationalization, or will simply and truthfully reply, " I don't know why I did it."

Indeed it appears probable that in meeting the small stresses and vexations of daily life, none of us maintains an absolutely unwavering level of personality, but that we are constantly solving our difficulties by the aid of some form of regression. This conclusion seems to be borne out by the structure of our dreams, which so generally are "an expression of early modes of mental functioning," and "a process whereby we are brought face to face with our earlier selves" (36). This is particularly true of those dreams which occur as an attempted solution of a recent conflict, but of which the manifest content shows a return to some period of childhood or youth.

The moral changes which are found to supervene so frequently in children upon an attack of encephalitis lethargica seem to be explicable by the theory of regression. The increased suggestibility and the heightened susceptibility to emotional stress, with the highly characteristic failure of adjustment to the inhibitions and sanctions of the social order, especially shown by persistent thieving and lying, the combination of mental anathy and drop in attention with explosive irritability, all appear to be due to an induced regression which is the result of the suppression of the epicritic control over the protopathic instinctive tendencies. The importance of these post-encephalitic phenomena lies in the fact that they follow as the result of a toxic condition which stamps itself upon the central nervous system in definite cellular changes, especially in the mid-brain. We are thus faced with the question of the precise relationship between these perversions of character and the concomitant somatic alterations in the substance of the brain. misdemeanours seem to be clearly traceable to those conflicts which arise out of the stresses of home life, and which may best be grouped together under the German term "Elternkonflikts." The seeming supplanting of a child in the affections of its parents by the birth of another child, or the constant bickerings and quarrellings of the parents or other children, may sometimes produce, especially in neuropathic children, a state of conflict which finds solution in a return to the "ideal companion" stage of psychic development. or to a world of fantasy with which the ego-schema can find itself in complete harmony. This lack of harmony is also the basis of the so-called inferiority complex, which is still another of the more frequent underlying causes of delinquency(87).

The stress of competition in the rough-and-tumble life of the streets and courtyards, or in the school, falls with special weight upon those who are less alert, either physically or mentally, than their companions, and they soon appreciate the gap which separates them from their quicker-witted companions. This fact forms one of the greatest defects in the English system of special schools, entirely distinct and apart from the ordinary elementary school. Living, as the majority of these children do, in a milieu in which public opinion is very freely and openly expressed without equivocation, they are daily exposed to the jeers and taunts of their comrades, and very often to the constant nagging of disappointed and exasperated parents, who naturally feel acutely the slur which certification to a special school must necessarily imply, there is small cause for wonder that these children, especially if they belong to the backward and borderland group, develop a sense of inferiority and of resentment against the community which has condemned them to such treatment. It is, of course, perfectly true that the reduction in the epicritic capacity for forming abstract judgments or of lack of "wisdom" may tend to impulsive action, but it is highly probable that much of the misdemeanour which is attributed to feeble-mindedness is not due to defective intelligence per se, but is directly due to the inferiority complex for which society is itself responsible.

The inferiority complex has deep ramifications in many lives, and is a potent factor not only in our reaction to our social environment, but also serves as the unconsciously-acting directive force behind many actions which seem superficially to have quite a different origin, and even to have their basis in some such motive as vanity or ambition.

Still another result of the same cause is the sense of unworthiness or excessive sinfulness which marks so many forms of mental disorder. That these depressive emotional disorders are found to be associated with disturbed visceral reactions, endocrine disturbance, or the presence of some focus of sepsis, is an argument of no validity against the theory of an ego-schema, compounded as such a schema is out of the proprioceptive and exteroceptive stimuli which form the basis of self-consciousness. Such an association is but additional proof of the intricate interaction between the endogenous and exogenous factors which go to the make-up of character.

"For of the soul the body form doth take, For soul is form and doth the body make (38).

(1) P. 406.—(2) Hoffing, Psychology, p. 349.—(3) ἄνθρωπος φύσει πολιτικόν  $\zeta \tilde{\varphi} \partial \nu$ . Aristotle, Politics, i, 2.—(4) Julius Casar, Act i, scene 2, line 201.—(5) In Teutonic folklore the term "Kobbold" (which is probably cognate with "goblin") originally meant a hut sprite. It became associated with the idea of dwarfs or little-men who mine for precious metals in the mountains. (De Animantibus subterraneis) thus describes them: "They are called little miners, because of their dwarfish stature, which is about two feet. venerable-looking, and are clothed like miners. . . . This kind does not often trouble the miners, but they idle about the shafts and tunnels and really do nothing. Sometimes they throw pebbles at the workmen, but they rarely injure them unless the workmen first ridicule or curse them. . . . They are especially active in the workings where metal has recently been found, or where there are hopes of its discovery." The metal cobalt derives its name from this superstition. The word Kobbold is used by Luther to translate the Hobrew "Lilith" in Isaiah xxxiv, 14 (A.V. "night-monsters").—(\*) Lazar, Zeitschr. f. Kinderheilkunde, 1913, p. 523. Dr. Lazar mentioned in conversation that in five cases of boy-murderers which he had investigated, the culprit had belonged in every case to the Kobbold type. It is of interest in this connection to read a contemporary description of the murderer Wainewright, "a man with a massive head in which the animal propensities were largely developed. His eyes were deeply set in his head; he had a square solid jaw . . . as to moral character he was a man of the lowest stamp." Havelock Ellis (*The Criminal*, p. 16) adds, "He seems to have been born of a failing and degenerate stock." Yet Wainewright wrote criticisms and essays which were considered sufficiently good to be edited by Hazlitt! The description of the physical configuration of the poisoner, Dr. Neill Cream, who may be taken as a good example of the

so-called "moral imbecile," closely conforms to the Kobbold type.—(?) For a discussion of this type cf. Lazar, Zeitschr. f. Kinderheilkunde, 1920, p. 113.—(\*) Heredity and Eugenics, p. 114.—(\*) Proc. Soc. Experimental Biology and Medicine, 1921.—(1\*) P. 197, op. cit.—(1\*) Cf. Jensen, Feebleness of Growth and Congenital Dwarfism, 1921.—(1\*) Shuttleworth (Brit. Med. Journ., September 11, 1909), states that of 120 cases in which the age of the parents is recorded, 41 were over 40 years of age and only 14 were under 30 years. Of 107 Mongols, 68 were stated to be last born (63 per cent.), and at Earlswood, 46 per cent.—(1\*) Psyche, iii, p. 240.—(1\*) Lecture to London County Council, June 26, 1912.—(1\*) Berman, The Glands regulating Personality, 1922.—(1\*) Whetham, The Family and the Nation, p. 118.—(1\*) Ethics, Book vi.—(1\*) Tredgold, Mental Deficiency, p. 121.—(1\*) Myers, Human Personality, pp. 64-67 (1907 edition).—(2\*) Spearman, Psychological Review, xxi, No. 2; also Presidential Address, Psych. Sect. Brit. Association, 1925. Cf. also Burt, "Educational Abilities" (L.C.C. Report), 1921.—(2\*) Quoted by Macdougall, The Group Mind, p. 18.—(2\*) Rivers, Instinct and the Unconscious, 1921.—(2\*) Myers, Brit. Assoc., Psychol. Sect., Presidential Address, 1922, p. 11.—(2\*) Mott has produced evidence that in schizophrenia (dementia præcox) there are clearly marked cellular changes in the sex-glands.—(2\*) Parsons, "Bowman Lecture," Lancet, July 18, 1925.—(1\*) Psychological Principles, p. 363.—(2\*) Integration of the Nervous System, p. 325.—(2\*) This is still the stage of development of language in various primitive races. Thus Miss Kingsley describes a Central African tribe, the members of which found it difficult to communicate with one another in the dark, when gestures could not be appreciated.—(2\*) Cf. Myers, Journal of Psychology, December, 1921.—(2\*) Studies in Neurology, p. 669.—(2\*) Cf. Golla, Croonian Lectures, 1921.—(2\*) Introductory Lectures, p. 299.—(2\*) For the substance of this section I am indebted to Prof. L

The Myth of the Unconscious Mind. By Joseph Shaw Bolton, M.D., D.Sc., F.R.C.P.Lond., Fellow of University College, London, Medical Director, West Riding Mental Hospital, Wakefield; Professor of Mental Diseases, University of Leeds.

To believers in portents the circumstances surrounding the evolution of a great personality are ever of interest, and to such the birth of the promulgator of the myth of the unconscious mind must especially appeal, surrounded as it is by features of a truly extraordinary character.

The birth of Sigmund Freud was adumbrated some two years before the event by the prophetic instinct of *Punch* in a cartoon entitled, "The Russian Frankenstein and his Monster." How do we know this? Obviously because the monster is composed entirely of phallic symbols, such as cannons, torch, bloody sword, etc. Freud was conceived during a great European war, and he was born at the time of the Treaty of Paris. Can it be merely a coincidence that his greatest triumphs occurred at the period of the recent European war and the Treaty of Versailles?

Sigmund Freud was of Jewish parentage, and was the first child of his mother, who was little more than a girl at the time, whereas

his father was already a grandfather. With Sigmund lived his nephew John, who was a year older and somewhat stronger than he, and to the relations which existed between the boys Freud attributes a really remarkable influence on his future life.

Freud possessed three heroes whose lives, through some real or fancied resemblance, he considered in rapport with his own. These were Goethe, Hannibal and Napoleon. The last two will be referred to later in Freud's own words, but the first requires immediate mention.

Goethe at the time of his birth was in a state of asphyxia neonatorum, from which he was with difficulty resuscitated. Freud was also born black, but in his case the colour was due to a thick covering of black lanugo or down. Freud's darkness of hue was therefore of a more natural and perhaps significant character. Goethe was the son of an imperial councillor, whereas Freud can credit himself only with the prophecies that his mother was to give birth to a great man, and that he was destined to become a minister of state.

In three other respects, puerile to the ordinary man, but significant to a Freudian, Goethe was also the superior of Freud. His name possesses six letters to the five of Freud, the first letter of his name, G, follows the F of Freud, and the cyphers of the year in which he was born, 1749, add up to 21, whereas in the case of Freud, 1856 add up only to 20. On the other hand the two dates are obviously connected, since 856 is the complement of 749, and if it be noticed that 2 is missing from the series, the obvious explanation is that the two introductory cyphers sum up to two. When one adds that Goethe actually took a degree in law, whereas Freud forsook law for medicine, and that Goethe's Italian journey occurred exactly a hundred years before the critical journey of Freud to Paris, surely no more need be said in explanation of Freud's heroworship of Goethe.

I have endeavoured in this description to weave, according to Freudian method, random association, truth and inference into a concrete whole in order that the reader may more clearly appreciate the amazing extracts which follow.

I shall first deal with dream interpretation, the "discovery" of Freud on which he based his method of psycho-analysis, and his later "discoveries" of the unconscious mind, psychic determinism, the foul ædipus complex, etc.

It is necessary, however, as a preliminary to indicate to the reader with what materials the Freudian deals, and by contrast to point out his fundamental error.

Does the skilled engineer, as part of his training for the manufacture of the marvellous machinery employed, say, in the textile

trades, receive a careful education in the structure and purpose of the flint implements employed by uncivilized man for a period of time to be reckoned in hundreds of thousands of years? Do the leaders of human thought who reach such intellectual and moral heights as are at present attainable by the civilized human mind of but a few thousand years of growth depend for their mental pabulum on the primitive animal instincts of early man, and on such inferences as we have been able to acquire with regard to his superstitious fears of the unknown and to the manner in which he endeavoured to allay them?

Not only is this the method of the Freudian in his system of pseudo-psychology, but, as I shall presently indicate, he exercises his ingenuity when facts fail him in finding reasons why these should be made to fit. If black appears white, it is only because in this instance white means black; if the positive turns up wrongly, it is only because in this instance it really represents the negative; if the matter is entirely irrelevant, this merely means that something has been substituted by the "unconscious mind" because the mental Cerberus, lying wakeful between it and the "conscious mind," has first to be deceived in order that the poor unfortunate conscious mind may be disturbed by thoughts too wicked for Mrs. Grundy to permit, and—mark well the point—too obscure for it to understand till they are interpreted by the psycho-analyst.

I feel that I cannot here do better, even at the risk of fatiguing the reader, than give in his own words a glimpse into the unhealthy meanderings of the "conscious mind" of Freud whilst he is engaged in interpreting one of his own dreams, and tracing back his inchoate recollections through the first forty years of his life.

In 1897 Freud was nominated Professor Extraordinarius, and was deeply concerned lest the fact of his being a Jew should be a bar to his election, as had been the case with regard to two of his senior colleagues.

One morning he dreamed the following dream:

"It consisted of two thoughts and two images, so that a thought and an image alternated. But I here record only the first half of the dream, because the other half has nothing to do with the purpose which the citation of the dream should serve.

"I. Friend R— is my uncle. I feel great affection for him.

"II. I see before me his face somewhat altered; it seems to be elongated; a yellow beard, which surrounds it, is emphasized with peculiar distinctness.

"Then follow the other two portions, again a thought and an image, which I omit" (p. 116).

By a lengthy interpretation of this he satisfies himself that one colleague is a criminal and that the other is a simpleton, and therefore their being Jews was not the real bar to their promotion. He then continues his study of his dream as follows:

"I shall now continue the interpretation of a dream which has already proved instructive—I refer to the dream in which friend R— is my uncle. We have carried its interpretation far enough for the wish-motive, of being appointed professor, to assert itself tangibly. . . . The dream is my own. . . . If my desire to be addressed by a new title proves so strong, it gives proof of a morbid aubition, which I do not know to exist in me, and which I believe is far from my thoughts . . . but if this be true, my ambition has long since transferred itself to other objects than the title and rank of assistant professor.

"Whence, then, the ambition which the dream has ascribed to me? Here I remember a story which I heard often in my childhood, that at my birth an old peasant's wife had prophesied to my happy mother (I was her firstborn) that she had given to the world a great man. Might my hunger for greatness have originated from this source? But here I recollect an impression from the later years of my childhood, which would serve still better as an explanation. It was of an evening at an inn on the Prater, where my parents were accustomed to take me when I was eleven or twelve years old. We noticed a man who went from table to table and improvised verses upon any subject that was given to him. I was sent to bring the poet to our table, and he showed himself thankful for the message. Before asking for his subject he threw off a few rhymes about me, and declared it probable, if he could trust his inspiration, that I would one day become I can still distinctly remember the impression made by this second a 'minister.' prophecy. It was at the time of the election for the municipal ministry; There were even some Jews amongst them; every industrious Jewish schoolboy therefore had the making of a minister in him. Even the fact that shortly before my enrolment in the university I wanted to study jurisprudence, and changed my plans only at the last moment, must be connected with the impressions of that time. A minister's carcer is under no circumstances open to a medical man. And now for my dream. I begin to see that it transplants me from the sombre present to the hopeful time of the municipal election, and fulfils my wish of that time to the fullest extent. In treating my two estimable and learned colleagues so badly, because they are Jews, the one as a simpleton and the other as a criminal —in doing this I act as though I were the Minister of Education, I put myself in his place. What thorough revenge I take upon his Excellency! He refuses to appoint me professor extraordinarius, and in return I put myself in his place in the dream " (pp. 160-2).

He then introduces a series of dreams concerning Rome and his passion to visit that city, and afterwards proceeds as follows:

"It was during my last journey to Italy, which, among other places, took me past Lake Trasimenus, that I at last found what re-enforcement my longing for the Eternal City had received from the impressions of my youth; this was after I had seen the Tiber and had turned back with painful emotions when I was within 80 kilometres of Rome. I was just broaching the plan of travelling to Naples vid Rome the next year, when this sentence, which I must have read in one of our classical authors, occurred to me: 'It is a question which of the two paced up and down in his room the more impatiently after he had made the plan to go to Rome-Assistant Headmaster Winckelman or the great general Hannibal.' I myself had walked in Hannibal's footsteps; like him I was destined never to see Rome, and he, too, had gone to Campania after the whole world had expected him in Rome. Hannibal, with whom I had reached this point of similarity, had been my favourite hero during my years at the Gymnasium; like so many boys of my age, I bestowed my sympathies during the Punic war, not on the Romans, but on the Carthaginians. Then, when I came finally to understand the consequences of belonging to an alien race, and was forced by the anti-Semitic sentiment among my class-mates to assume a defiant attitude, the figure of the Semitic commander assumed still greater proportions in my eyes. Hannibal and Rome symbolized for me as a youth the antithesis between the tenaciousness of the Jews and the organization of the Catholic Church.

"And now for the first time I happen upon the youthful experience which, even to-day, still manifests its power in all these emotions and dreams. I may have been ten or twelve years old when my father began to take me with him on

his walks, and to reveal to me his views about the things of this world in his conversation. In this way he once told me, in order to show into how much better times I had been born than he, the following: 'While I was a young man, I was walking one Saturday on a street in the village where you were born; I was handsomely dressed and wore a new fur cap. Along came a Christian, who knocks my cap into the mud with one blow and shouts, "Jew, get off the sidewalk." 'And what did you do?' 'I went into the street and picked up the cap,' was the calm answer. That did not seem heroic on the part of the big strong man who was leading me, a little fellow, by the hand. I contrasted this situation, which did not please me, with another more in harmony with my feelings—the scene in which Hannibal's father, Hamilcar Barka, made his boy swear at the domestic altar to take vengeance on the Romans. Since that time Hannibal has had a place in my phantasies.

"I think I can follow my enthusiasm for the Carthaginian general still further back into my childhood, so that possibly we have here the transference of an already formed emotional relation to a new vehicle. One of the first books which fell into my childish hands, after I learned to read, was Thiers' Konsulat und Kaiserreich (Consulship and Empire); I remember I pasted on the flat backs of my wooden soldiers little labels with the names of the Imperial marshals, and that at that time Masséna (as a Jew Menasse) was already my avowed favourite. Napoleon himself followed Hannibal in crossing the Alps. And perhaps the development of this martial idea can be traced still further back into my childhood to the wish which the now friendly, now hostile, intercourse during my first three years with a boy a year older than myself must have actuated in the weaker of the two playmates" (pp. 164-6).

"Until the end of my third year we had been inseparable, had loved each other and scuffled with each other, and, as I have already intimated, this childish relation has constantly determined my later feelings in my intercourse with persons of my own age. My nephew John has since found many incarnations, which have revivified first one aspect, then another, of this character which is so ineradicably fixed in my unconscious memory. Occasionally he must have treated me very badly, and I must have shown courage before my tyrant, for in later years I have often been told of the short speech with which I vindicated myself when my father -his grandfather-called me to account: 'I hit him because he hit me.' This childish scene must be the one which caused non vivit to branch off into non vixit, for in the language of later childhood striking is called wichsen (German, wichsen -to smear with shoe-polish, to tan, i.e., to flog); the dream activity does not hesitate to take advantage of such connections" (p. 334).

It is thus evident that Freud traces his ambition and his disabilities, coloured by ideas of anti-Semitic persecution, to his quarrels with his young nephew John during the first three years

As an autobiography this account is of intense interest: I have obtained similar descriptions from my mental patients. As an example of the morbid material and method of the Freudian psychology, which hopes not to supplement, but actually to replace our accumulated knowledge of mind and brain, it stands aloneunworthy of condemnation.

Interpretation of dreams.—Dreams from the dawn of history have been regarded with the superstitious dread ever displayed in the face of the unknown; and interpreters of dreams have probably never failed to find clients, and have certainly never omitted to

Apart from the question of whether there is anything in dreams to interpret at all beyond the finding of reasons for the mere existence of their crude content, a fundamental fallacy attaches to all attempts at interpretation, namely, the fact that what is interpreted is not the series, usually of visions, which constitutes the dream, but the descriptive account of this provided by the dreamer. Further, this verbalization necessarily varies remarkably during repetition, as does any description which has not by constant repetition been learned by heart.

When with this fallacy is associated the really amusing further fallacy of Freudian manipulation to be referred to shortly, it is really difficult to understand how any being capable of reason can find in the result anything but the merest confabulation.

Freud states—"When the work of interpretation has been completed the dream may be recognized as the fulfilment of a wish" (p. 102). After his general description of what he means by this, he adds the following characteristic platitudes:

"What animals dream of I do not know. A proverb for which I am indebted to one of my readers claims to know, for it raises the question: 'What does the goose dream of?' The answer being 'Of maize.' The whole theory that the dream is the fulfilment of a wish is contained in these sentences.

"We now perceive that we should have reached our theory of the hidden meaning of the dream by the shortest road if we had merely consulted colloquial usage. The wisdom of proverbs, it is true, sometimes speaks contemptuously enough of the dream—it apparently tries to justify science in expressing the opinion that 'Dreams are mere bubbles,' but still for colloquial usage the dream is the gracious fulfiller of wishes. 'I should never have fancied that in the wildest dream,' exclaims one who finds his expectations surpassed by reality" (p. 112).

Out of the seething mass of foulness published by the greater Freudians, I have with difficulty extracted the following relatively cleanly samples of dream interpretation.

Freud quotes from Volkelt's "finely and fervently written book" as follows:

"Thus the breathing lungs find their symbol in the flaming stove with its gaseous roaring, the heart in hollow boxes and baskets, the bladder in round, bag-shaped or simply hollowed objects. The male dream of sexual excitement makes the dreamer find in the street the upper portion of a clarionette, next to it the same part of a tobacco pipe, and next to that a piece of fur. The clarionette and tobacco pipe represent the approximate shape of the male sexual organ, while the fur represents the pubic hair. In the female sexual dream the tightness of the closely approximated thighs may be symbolized by a narrow courtyard surrounded by houses, and the vagina by a very narrow, slippery and soft footpath, leading through the courtyard, upon which the dreamer is obliged to walk, in order perhaps to carry a letter to a gentleman" (Volkelt, p. 39). "It is particularly noteworthy that at the end of such a physically exciting dream, the phantasy, as it were, unmasks by representing the exciting organ or its function unconcealed. Thus the 'tooth-exciting dream' usually ends with the dreamer taking a tooth out of his mouth" (p. 72).

The reader may perhaps be somewhat be wildered by this remarkable effusion, so I hasten to provide something simpler and more credible for his consumption:

"In connection with a longer dream, it seemed to this lady that she saw her fifteen-year-old daughter lying dead before her in a box. She was strongly inclined to convert this dream-image into an objection to the theory of wish-fulfilment, but herself suspected that the detail of the box must lead to a different conception of the dream. In the course of the analysis it occurred to her that on the evening before, the conversation of the company had turned upon the English word 'box,' and upon the numerous translations of it into German, such as box, theatre box, chest, box on the ear, etc. From other components of the same dream it is now possible to add that the lady had guessed the relationship between the English word 'box' and the German Büchse, and had then been haunted by the memory that Buchse (as well as 'box') is used in vulgar speech to designate the female genital organ. It was therefore possible, making a certain allowance for her notions on the subject of topographical anatomy, to assume that the child in the box signified a child in the womb of the mother. At this stage of the explanation she no longer denied that the picture of the dream really corresponded to one of her wishes. Like so many other young women, she was by no means happy when she became pregnant, and admitted to me more than once the wish that her child might die before its birth; in a fit of anger following a violent scene with her husband she had even struck her abdomen with her fists in order to hit the child within. The dead child was, therefore, really the fulfilment of a wish, but a wish which had been put aside for fifteen years, and it is not surprising that the fulfilment of the wish was no longer recognized after so long an interval. For there had been many changes meanwhile" (pp. 130-1).

The more one studies this interpretation, the more one feels a sensation akin to awe at the credulity of the writer. It is colossal. I now quote a dream of apparently simple character whose interpretation really renders one speechless; and lest it should seem at all unique, I follow it at once by one which to some extent lays bare the Freudian method of carrying backwards the recollection of the subject even to infancy:

"For example, who would suspect a sexual wish in the following dream until the interpretation had been worked out? The dreamer relates: Between two stately palaces stands a little house, receding somewhat, whose doors are closed. My wife leads me a little way along the street up to the little house and pushes in the door, and then I slip quickly and easily into the interior of a courtyard that slants obliquely upwards.

"Anyone who has had experience in the translating of dreams will, of course, immediately perceive that penetrating into narrow spaces and opening locked doors belong to the commonest sexual symbolism, and will easily find in this dream a representation of attempted coitus from behind (between the two stately buttocks of the female body). The narrow slanting passage is of course the vagina; the assistance attributed to the wife of the dreamer requires the interpretation that in reality it is only consideration for the wife which is responsible for the abstention from such an attempt. Moreover, inquiry shows that on the previous day a young girl had entered the household of the dreamer who had pleased him, and who had given him the impression that she would not be altogether opposed to an approach of this sort. The little house between the two palaces is taken from a reminiscence of the Hradschin in Prague, and thus points again to the girl who is a native of that city" (pp. 241-2).

"A young man has a very distinct dream which recalls to him phantasies from his infancy which have remained conscious to him; he was in a summer hotel one evening; he mistook the number of his room, and entered a room in which an elderly lady and her two daughters were undressing to go to bed. He continues: 'Then there are some gaps in the dream; then something is missing; and at the end there was a man in the room who wished to throw me out, with whom I had to wrestle.' He endeavoured in vain to recall the content and purpose of the boyish fancy to which the dream apparently alludes. But we finally become

aware that the required content had already been given in his utterances concerning the indistinct part of the dream. The 'gaps' were the openings in the genitals of the women who were retiring: 'Here something is missing,' described the chief character of the female genitals. In those early years he burned with curiosity to see a female genital, and was still inclined to adhere to the infantile sexual theory which attributes a male genital to the woman" (pp. 308-9).

Both these dreams and interpretations are of a type calculated to make the reader doubt my bonâ fides. They are, however, I assure him, but mild samples of Freudian literature, and could be multiplied indefinitely.

To complete my list of quotations from the master himself I will now insert one of Freud's personal dreams, together with his interpretation, since this latter throws interesting sidelights on his general personal habits and characteristics:

"That night I had the following dream: I am very incompletely dressed, and I go from a dwelling on the ground floor up a flight of stairs to an upper storey. In doing this I jump over three steps at a time, and I am glad to find I can mount the steps so quickly. Suddenly I see that a servant girl is coming down the stairs, that is, towards me; I am ashamed and try to hurry away, and now there appears that sensation of being impeded; I am glued to the steps and cannot move from the spot

"How do this flight of stairs and this woman get into my dream? Being ashamed because one is not fully dressed is undoubtedly of a sexual character; the servant of whom I dream is older than I, sulky, and not in the least attractive. These questions call up exactly the following occurrences: When I make my morning visit to this house I am usually seized with a desire to clear my throat; the product of the expectoration falls upon the steps. For there is no spittoon on either of these floors, and I take the view that the stairs should not be kept clean at my expense, but by the provision of a spittoon. The housekeeper, likewise an elderly and sulky person, with instincts for cleanliness, takes another view of the matter. She lies in wait for me to see whether I take the liberty referred to, and when she has made sure of it, I hear her growl distinctly. For days thereafter she refuses to show me her customary regard when we meet. On the day before the dream, the position of the housekeeper had been strengthened by the servant girl. I had just finished my usual hurried visit to the patient when the servant confronted me in the anteroom and observed: 'You might as well have wiped your shoes to-day, doctor, before you came into the room. The red carpet is all dirty again with your feet.' This is the whole claim which the flight of stairs and the servant-girl can make for appearing in my dream.

"An intimate connection exists between my flying over the stairs and my spitting on the stairs. Pharyngitis and diseases of the heart are both said to be punishments for the vice of smoking, on account of which vice, of course, I do not enjoy a reputation for great neatness with my housekeeper in the one house any more than in the other, both of which the dream fuses into a single image " (pp. 201,

202 and 203).

I will add but one more dream-quotation, this time from Ernest Jones. The interpretation of this dream presents to the reader a good example of Freudian manipulation, in this instance by distortion and inversion, on the part either of the "unconscious mind" of the dreamer, or of the "conscious mind" of the analyst:

"She stood at the seashore watching a small boy, who seemed to be hers, wading into the water. This he did until the water covered him and she could only see his head bobbing up and down near the surface. The scene then changed into a crowded hall of an hotel. Her husband left her, and she 'entered into conversation with' a

stranger. The second half of the dream revealed itself in the analysis as representing a flight from her husband and the entering into intimate relations with a third person, behind whom was plainly indicated Mr. X—'s brother mentioned in the former dream. The first part of the dream was a fairly evident birth phantasy. In dreams, as in mythology, the delivery of a child from the uterine waters is commonly presented by distortion as the entry of the child into water; among many others, the births of Adonis, Osiris, Moses and Bacchus are well-known illustrations of this. The bobbing up and down of the head into the water at once recalled to the patient the sensation of quickening she had experienced in her only pregnancy. Thinking of the boy going into the water induced a reverie, in which she saw herself taking him out of the water, carrying him to the nursery, washing him and dressing him, and installing him in her household.

"The second half of the manifest dream therefore represented thoughts concerning the elopement, that belonged to the first half of the underlying latent content; the first half of the dream corresponded with the second half of the latent content, the birth phantasy. Besides this inversion in order, further inversions took place in each half of the dream. In the first half the child entered the water, and then his head bobbed; in the underlying dream thoughts first the quickening occurred, and then the child left the water (a double inversion). In the second half her husband left her; in the dream thoughts she left her husband "(pp. 203-4).

The unconscious mind.—It is common knowledge that experience of any kind leaves an imprint on the nervous system whereby under certain circumstances such experience can be recollected. Some units of experience can readily be recalled at will, others with difficulty or only with assistance, many not at all. Some are recalled as actual visual images; others by the aid of words. Out of the inchoate mass of actual or recalled recent experience, certain elements when we are lying day-dreaming or asleep often rise into consciousness. In the former case we may voluntarily accept or reject them as a part of our directed voluntary thought. In the latter we merely play the part of a spectator, often of our own acts, and recall the dream more or less clearly when we awake. Such a dream can be recalled as a series of pictures, or described to ourselves or others in words; and between these two there is a world of difference.

All such experience, however, is merely the raw material of thought—the mental stock-in-trade of the individual—and some of it very musty or rusty. It is naturally in no sense a "mind."

It must not be confused with the "unconscious mind" of the Freudians of all varieties, sexual and non-sexual, which is commonly for convenience spoken of as the "unconscious" and which I here entitle a myth.

What is the "unconscious mind"? Freud, so far as I am aware, has never defined it, though he has quite enough to say about it as an entity perpetually warring against the "conscious mind," and kept from the knowledge of this by a mythical entity, the "censor"—presumably a sort of Mrs. Grundy. Freud even goes further in order to make his theory fit the facts (since a large part of our mental stock-in-trade can be voluntarily recalled), and splits

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the "unconscious" into the "unconscious," a sort of nethermost devil beyond conscious knowledge, and the "preconscious," a kind of familiar devil who can be aroused if one dares. This necessitates the existence of an "endo-psychic censor" between the "unconscious" and the "preconscious" in order that his human demoniacal mechanism may show a semblance of completeness. I must not forget to add that the exorcising of the censors and the consequent flooding of the conscious mind (perhaps of a young girl) with the whole damnable stream of primitivity is at the beck and suggestion of the psycho-analyst.

Ernest Jones (p. 2) says, regarding Freud:

"On tracing the unconscious thoughts as far as possible—using a technique, known as psycho-analysis, specially devised for the purpose—he found himself in a strange mental world quite foreign to that of consciousness, and to this he refers under the name of "the unconscious." On then studying the characteristics of this buried stratum of the mind, he found that it was extremely primitive in nature, and closely akin to the mind both of the infant and of the savage."

In spite therefore of the absence of a definition, we at any rate know that this nethermost demon exists in Freud, and we presume also in his followers. Even Jones attempts no definition, but remarks (p. 126):

"The preceding description may be summarized in a single statement: According to psycho-analysis, the unconscious is a region of the mind, the content of which is characterized by the attributes of being repressed, contive, instinctive, infantile, unreasoning and predominantly sexual. A typical example of an unconscious mental process, illustrating all of these, would be the wish of a little girl that her mother might die so that she could marry her father. The six attributes in question, together with others not here mentioned, make up a constant and clearly defined conception of the unconscious which is formulated on the basis of experience that may at any time be tested."

So far as I understand this expression of the ædipus complex—

- (I) The little girl does not know that she wishes to marry her father.
  - (2) She actually wishes to marry her father.
  - (3) It is an instinct to want to marry one's father.
  - (4) Young children in particular want to marry their fathers.
- (5) Such is unreasoning, presumably because the child knows what she wants.
- (6) It is predominantly sexual, in other words the little girl wishes to perform the sexual act with her father.

My only comment is that I hope the little child will be content to wish that her mother will die.

The following short quotations from Wittels give further remarkable details concerning the malignant activities of this mythical entity:

"There is no such thing as chance. Our will is not free. The conscious thinks, but the unconscious directs. We make mistakes, slips of the tongue, we pick up

the wrong thing, we forget, because the unconscious has a will of its own which differs from our conscious will; and because the unconscious does as it pleases with us when our strictly logical attention lapses for a moment "(pp. 98-9).

"The mind, at its deeper levels, is not only malicious; at these levels the law of retaliation prevails with inexorable force. An eye for an eye and a tooth for a tooth would seem to have been the most primitive, the most elemental, notion of justice. The conscience of the unconscious is so strict that it is apt, in accordance with the law of retaliation, to sentence the offender to suicide for crimes that have been committed only in the imagination" (p. 242).

"Very remarkable is the mechanism which works so as to win pleasure without incurring blame (Stekel). When a woman who is sexually assaulted faints, the working of such a mechanism is obvious. She ought to resist to the uttermost for the sake of her 'honour.' The faint relieves her of this responsibility" (p. 244).

Psycho-analysis.—Stoddart writes as follows with regard to this procedure:

"Not only is the technique of psycho-analysis extremely difficult, requiring years of practice to attain proficiency therein, but each individual case requires an enormous amount of time. Even in the hands of the great masters of psycho-analysis the shortest cases take an hour a day for three months and some take an hour a day for three years" (p. 183).

It is truly extraordinary that a procedure needing so much time and such experience for its proper performance is so widely attempted and so commonly spoken of as a method one ought to adopt as part of one's routine. One may also ask, What happens to all the experimental patients? Wittels equally suggests grave difficulties:

"Analyses extending back into the days when the patient was in his mother's womb are a heroic undertaking. Freud's incomparable patience, thanks to which he has made some of his most splendid discoveries, is a glorious achievement of the human spirit. But this is not a road along which all the lesser analysts should try to follow him" (p. 224).

And in a further paragraph he indicates clearly the dangerous influence likely to be possessed by the analyst:

"In his unconscious, he terms the physician his father, his brother, his friend. Nay, more, the unconscious ignores differences of sex. The physician is his mother, his sister, his inamorata. He loves the analyst, or hates him, according to the nature of the repressed experiences for which the analyst acts as a substitute" (p. 95).

Who, after reading these sentences, would submit his young daughter to psycho-analysis?

Stock-in-trade of the psycho-analyst.—As the "censor" endeavours to control the dream and the "unconscious" must therefore pass up its disreputable goods in disguised form, numerous ingenious methods of dodging the censor are resorted to. According to Freud (p. 138) it is necessary "to discover the latent dream content, which far surpasses the manifest dream content in point of significance."

"The unconscious" therefore practises such contrivances as distortion, symbolism, condensation, displacement, transformation to opposite, subtraction, inversion, and secondary elaboration. Personally, I am sure that by the use of half of these methods I could get anything whatever out of any dream.

I shall summarize these practices under the terms manipulation, word-play and symbolism in the examples which follow.

Jones gives an excellent example of the first, which it is difficult to believe is written by a sane man in sober earnest:

"In another dream the same patient imagined she was called 'Hokerring,' a neologism produced by fusing the two words 'smoked herring'; this process may be represented thus:

"(SM) OKE (D)
H ERRING.

("The parentheses indicate letters omitted in the neologism.) The term smoked herring reminded her of bloater, and of a rather vulgar word in her native language meaning nude, pronounced bloat" (p. 200).

This story—I beg Jones's pardon—reminds me of the unique antiquarian discovery of the immortal Pickwick:

+
B I L S T
U M
P S H I
S. M.
A R K

The following example of number-manipulation, also from Jones, is noteworthy:

"One night he dreamed that he was vainly trying to find his old home in a certain street where he had lived until about the age of seven. After considerable difficulty he managed, however, to recognize the door number and joyfully exclaimed, 'Yes, that's it, number 72.' He then woke up. Now, in reality, the number of the house in question was 243, as he at once recollected when awake, and as I took the trouble to verify by asking a relative of his.

and as I took the trouble to verify by asking a relative of his. . . . . "We begin with 72, the erroneous number in the dream. To this he remarked that 72 equals  $36 \times 2$ ; 72 was the age at which his grandmother, of whom he had been specially fond, had died, 36 was the age at which his mother had died, 2 was the only numeral common to the correct and the false numbers of the house, 243 and 72. There were two people for whom his imagination longed, both represented by the age at which they had died" (pp. 244-5).

I can only compare this to my remarks relating to Goethe and Freud and made in joke (p. 26), or to a cryptogram for which I am indebted to Wohlgemuth. The latter is, of course, also a joke:

"It concerns the discovery of a cryptogram which reveals the 'true authorship' of the Psalms. These are generally attributed to King David, but from this cryptogram it would appear that Shakespeare is the real author. Here is the 'proof.' The name 'Shakespear' consists of ten letters; four of these are vowels, and six consonants; 4 and 6 written together make 46. Therefore: turn to Psalm 46, and as there are ten letters, to verse 10 of that Psalm. Count 6 words from the beginning of this verse, and we get 'I am.' Next count 6 words from the end of this verse, and we get 'will.' Then count 46 words from the beginning of the Psalm, and we get 'shake,' and counting 46 words from the end, neglecting 'Selah,' which does not belong to the text, we get 'spear.' We have thus deciphered the cryptogram: 'I am Will Shakespear,' the author of the Psalms' (pp. 216-7).

The following example of word-play taken from Jones is certainly ingenious:

"He dreamed that a man, whose name seemed to be Lysanias, was advancing towards him. Of the name he said that nothing was known of it beyond the fact that it is mentioned in Luke iii, 1, as that of a tetrarch of Abilene; it should be said that the patient was a professional Bible-reader. Remembering, however, that nothing occurring in a dream is without significance, I asked him to supply free associations to the names. The first one brought the words lyccum and licentious; his school (not in this country) was called a lyceum. When a school-boy he had been in the habit of resorting to an abbey ruin in the neighbourhood, for the purpose of indulging in sexual practices with an older boy called Leney. The name Lysanias (tetrarch of Abilene), therefore, expressed the fact of his having been licentious when at the lyceum by going to the abbey with Leney" (p. 257).

I think the last is worthy of the following statements by Freud himself:

"To change one's residence is readily replaced by 'to remove'—an ambiguous expression which may have reference to clothing. If the dream also contains a 'lift' (elevator), one may think of the word 'to lift,' hence of lifting up the clothing" (p. 321).

"I recall what significance dream allusions to that beautiful country had in the case of a female patient who had never been in Italy. (Itlay—German gen Italien—Genitalien—genitals)" (p. 196).

My account would be incomplete did I omit a short reference to symbolism, as this is the method whereby the "unconscious mind" is said best to succeed in eluding the censors, and getting ideas and thoughts up into the conscious mind which to it appear healthy, but which, under interpretation, are to me at least often calculated to produce horror and disgust. I will insert a few examples at random:

From Jones.—"In connection with the phallic signification of the staff wielded by Punchinello, one may remark that the word itself is cognate with the M.H.G. staben, to become stiff, both probably coming from a pre-Teutonic root sta, which means to stand up. A more familiar piece of knowledge is that the word 'yard,' used as a measure of length, had three centuries ago two other current meanings: (1) a staff, and (2) the phallus; it is still used in the latter sense by sailors. It is an equivalent of the jester's bauble. In addition to the long nose and staff already mentioned, Punchinello displays several other phallic attributes, the dog Toby being one of them" (p. 142).

I presume that this is why *Punch* prophesied the advent of Freud in a cartoon containing so many phallic symbols! (p. 25).

"A given symbol may have two or occasionally even more meanings; for instance, in dreams a room may symbolize either a woman or a womb. In that case the interpretation will depend on the context, the associations and other material available" (p. 139).

From Wittels.—"To-day we express the value of our property in terms of gold. The unconscious, however, has such a profound contempt for this yellow metal that, in dreams, gold is always a symbol for faces; just as, in the legends, Satan's gold always changes into excrement. What money and property signify to our inner self is likewise disclosed in dreams. Here, money always means love. To dream 'he owes me money' means 'he does not love me enough.' . . ."

"A man must be a veritable Comstick if he fails to note that the drunkard who caresses his bottle is inspired with the same sort of feelings as the lover who caresses his mistress" (p. 173).

From Stoddart.—"The supposedly accidental breakages by domestic servants supply another example. The servant would never admit, even to herself, that

the breakage was intentional; but it gratifies some unconscious wish, such as reduction of labour, tending to equalize the property of herself and her employer, personal revenge or some such unconscious desire" (p. 86).

"Many women wear painfully tight shoes, corsets or gloves for the sake of the

sensual effect produced by such articles of clothing" (p. 189).

I have now completed a task which, in spite of its repugnant nature, I have felt it my duty to perform. That this insidious poison, which is being instilled into the minds of the young by countless psycho-analysts, is doing untold harm, is known to many and should be known to all.

The fear lest "there should be something in it," the superstitious taint in so many which leads them to believe in fortune-telling and kindred matters, and lastly the desire to try any new thing in cases of nervous or mental illness, are chiefly responsible for the wide-spread diffusion of Freudism.

I should like, however, to conclude this essay in a lighter vein, and so will end with the following extract from a school letter which I received the other day:

"I came into a room at school and found my form 'table-tapping,' under the direction of a girl whose mother is a medium. I said she ought to know better than tell all her tripe to other girls. 'How,' I said, 'could a table made of wood from a tree call up spirits—except of course wooden casks?' 'It's your unconscious that does it,' echoed everybody. 'Unconscious rubbish,' I said. 'Don't be absurd, J—y,' they said to me, 'everyone has an unconscious.'"

## REFERENCES.

Sigmund Freud.—The Interpretation of Dreams. Authorized translation of third edition by A. A. Brill. London: George Allen & Company, Ltd., 1913.

Ernest Jones.—Papers on Psycho-Analysis, London: Bailliere, Tindall & Cox, 1918.

W. H. B. Stoddart.—Mind and its Disorders. London: H. K. Lewis & Co., 1919.

Fritz Wittels.—Sigmund Freud: His Personality, His Teaching, and His School. Translated from the German by Eden & Cedar Paul. London: George Allen & Unwin, Ltd., 1924.

A. Wohlgemuth.—A Critical Examination of Psycho-Analysis. London: George Allen & Unwin, Ltd., 1923.

The Story of the Central Mental Hospital, Tanjong Rambutan, Federated Malay States. By W. F. Samuels, L.M. &S. Dubl., its Medical Superintendent.

IN 1910 I was holding the appointment of Medical Officer and Magistrate at Anguilla in the St. Kits presidency of the Leeward Islands, British West Indies, when the Administrator one day handed me a cable, asking if I would accept the Medical Superintendency of the "Central Lunatic Asylum," Tanjong Rambutan, Perak, Federated Malay States. Fortunately the cable explained that Tanjong Rambutan was in the Federated Malay States, as neither he nor I had the slightest idea where it was.

I left St. Kits a month later, and arrived in Singapore on January 28, 1911, to find that the asylum was not nearly completed. It was not until November 1, 1911, that we actually took in our first case.

Tanjong Rambutan is in the state of Perak on the main railway line, about ten miles north of Ipoh, the chief town of the Kinta District, which is the great centre of tin-mining in the F.M.S.

It must have been six or eight years before I first heard of Tanjong Rambutan that the Government decided to build a "lunatic asylum" as they then called it, and close the lunatic wards attached to the various hospitals. It is said that the requirements were a large area of Government land in a healthy district, on the main railway line, and near a large town. It is also said that the then Director of Public Works, who had in the old days tramped the country before there was a railway, put his finger on Tanjong Rambutan without a minute's hesitation. To my mind a better site could not have been selected.

The reserve contains 573 acres of undulating land easily drained, though then mostly swamp and blukar.

The buildings cover an area of about 125 acres, with offices, kitchen, stores, etc., in the centre, and the male and female sides stretching on either side. The male side is about three times as large as the female, and the proportion was about the same when we first opened.

To begin with we had accommodation for about 260 patients of both sexes and of all nationalities, except European.

The staff consisted of myself, an assistant surgeon, two dressers, and a clerk and store-keeper; also a matron who could not speak English, and was replaced very shortly and given the post of work mistress, which she still holds.

At the end of the year we had admitted 220 males and 67 females. As the institution was built to accommodate 260 patients, it will be seen that at the very start we were overcrowded, and, in addition, dysentery was introduced with the first batch of patients we admitted from Kuala Lumpur on November 10, 1911. It will thus be noticed we did not start under the happiest of auspices.

Overcrowded as we were we had still not received any patient from Pahang or Negri Sembilan, the other two States in the Federation. It appears that it was so long between the decision to build and the completion of the buildings that the numbers of patients had increased out of all proportion.

This may seem an extraordinary state of things, but when it is remembered that these years covered booms in both tin and rubber, and a slump in the former, it is easy to see how all calculations were upset.

Before going further it might be as well to describe the wards:

The male wards were built to accommodate 30 patients each. They are 90 ft. long by 20 ft. wide, and 20 ft. in height. In front and behind there is a verandah 9 ft. wide. At the end of each ward there is a passage running at right angles to the ward 53 ft. 6 in. long with a bucket latrine at the end. Here I may add that night-soil is disposed of by trenching. The wards are brick-plastered, with a dado 7 ft. high of glazed bricks, roofed with Chinese tiles.

The windows, of which there are 30, extend to the floor and are closed with expanded metal, and have wooden shutters which can be closed in emergency. I have very rarely found it necessary to close the windows, so that the wards are quite cool and airy. On an extension of the front verandah are an attendants' room, two single rooms 12 ft. long, 10 ft. wide, and a ward store-room.

room, two single rooms 12 ft. long, 10 ft. wide, and a ward store-room.

The wards on the female side are built on the same plan, save that the original wards accommodated only 18 patients instead of 30. Since 1914, however, the female wards are exactly the same.

All the buildings are single-storied. Each ward had its own compound stretching the whole length of the ward and about 120 ft. wide. The wards are merely used as dormitories, as the verandahs serve for day-rooms. The dining-halls are placed one on each side of the kitchen and connected with it by covered ways.

As there is no need for fires we are saved a great deal of anxiety and expense. I must describe what was known as the male refractory ward. This was a small ward to accommodate 14 patients. It had two attendants' rooms and a store-room. Opening off a long covered passage at right angles to the verandah of the ward was a row of 20 single rooms. The whole place was surrounded by a wall 10-12 ft. high. There was a bath-room and a dining-shed in the compound, and a latrine placed against the wall. The gate was a large double-fold wooden door closed with a bar and a padlock on the outside! To enable the attendant in charge to open all the doors of this wonderful ward it was necessary for him to carry 25 keys. Can anyone imagine anything more likely to make an unfortunate patient refractory than the high walls, rows of single rooms, and a clanking bunch of 25 keys? The key system was awful, and one of the first things to be done was to persuade Government to change the system for a rational one. After considerable correspondence consent was obtained, and one difficulty was on the way to being settled.

The next thing was to tackle the overcrowding. Four new male and two female wards were authorized, but to get over the immediate difficulty four temporary wards, each accommodating 50 patients, were put in hand. When completed this would relieve

overcrowding; but seeing there were patients waiting to come in from Selangor, Negri Sembilan and Pahang, we could not expect this relief to last very long.

Our first attempt at clearing the swamp and blukar was made in this year, and we also made our first essay at vegetable gardening.

What should have been the infectious diseases ward, consisting of two attap buildings on metal frames, surrounded by a large compound enclosed in a 9-ft. iron fence, had to be used for ordinary patients, owing to our overcrowded state. We took the opportunity to make use of this compound as a vegetable garden.

The patients took so kindly to gardening that I approached the then Principal Medical Officer with the suggestion that we should have a farm. He, however, refused to support me, and the matter dropped. The following year I started a farm with patient labour, and I took the first opportunity when the Chief Secretary visited to show it to him, and the patients working there. I had no more opposition when I proposed farms, and a proposal to start pigs and cattle was adopted.

In 1913 an extension of the institution was decided upon. After a visit by the Principal Civil Medical Officer, Straits Settlements, the Federated Malay States Government agreed to take 200 patients from the Straits Settlements, as the asylum at Singapore was becoming overcrowded. It was decided not to enlarge the Singapore Asylum as it was very old.

A big scheme of building was decided upon at the same time.

The lay-out of the buildings was to be as follows:

On the male side the original dining-hall was enlarged to accommodate the Singapore patients, and from it a covered way met another covered way from which wards in rows of three led off. The first three faced Nos. 3, 4 and 5 of the original buildings, the next row had its back to this, and the next faced the second row. There were to be seven such rows built.

Originally these wards were to be 30-bed wards, but the scheme was modified so as to substitute in the fourth and fifth rows two 40-bed wards for two 30-bed wards. This was to accommodate chronics and such cases.

On the female side the wards were built so as to enclose a space. In this space were two rows of 30-bed wards placed back to back with a space of 100 ft. between so as to face the outside wards, which in turn faced inwards.

The accommodation was to be increased to 1,800. The cost was to be \$1,000,000, of which the Straits Settlements was to put up \$250,000 in 1914, and in each of the three succeeding years the Federated Malay States was to put up a like sum.

A large increase of staff was of course necessary, and a European medical officer, to be called the Assistant Medical Superintendent, was voted from the first of January, 1914.

The first farm had done so well that towards the end of 1913 I decided to build again. Mr. Saw Ah Fatt, the Senior Dresser,

later known as the Inspector, and I had some delightful rambles through lalang and swamp, searching for a site. We eventually decided on one on a hill overlooking some swampy ground, easily capable of drainage. The site was quite near to my quarters, but we actually approached it from the far side of the reserve. A benefit I personally reaped from this was that the draining of the swamp would lessen the mosquitoes at my quarters.

The Public Works Department had, in 1912, put in a large cement drain which drained some of the swamp near my house, but ended just above the opening of the house drains, and consequently did not affect the swamp below the farm site.

Also the drain did not affect the seepage, so I began to subsoil with milk-tins arranged in rows—four tins in the bottom row, three in the next, and then two, placed end to end. The tins were not cut, and the water found its way down the space between the rows of tins. I found these made most efficient subsoil drains, and as we at that time consumed a considerable quantity of tinned milk, the subsoiling provided a useful method of disposal of the tins. I used this method of milk-tin subsoil drainage for years, and even still for very short sections I make use of it, although we have now advanced so far that we make our own subsoil pipes, thanks to Mr. Ah Fatt's discovery of China clay on the reserve.

The wards which had been decided upon in 1912 were completed and handed over on July I, 1914. This gave us an extra 18-bed female ward and four 32-bed male wards. Even this did not altogether relieve our congestion, and we still had to make use of the temporary timber and attap buildings. About this time we realized that in the near future owing to building we should lose our sports padang, so it was decided to make use of a piece of land round which the attendants' quarters were built.

There were three deep holes at one end of this, one being almost 12 ft. deep and 20-25 ft. across. Fortunately the other end was high, so after we had thrown in stone and rubbish, we were able to find sufficient earth to do the rest of the filling without going very far. Even so it was a big undertaking, but would have been necessary even if we had not needed the padang to get rid of a favourite breeding-ground for mosquitoes. This padang now boasts a cricket pitch acknowledged to be the best in the whole district—I might say in the State of Perak.

I had hoped that the opening of the new wards would have made us more or less comfortable. Not so, however, as immediately it was noised abroad that we had extra accommodation, the Negri Sembilan and Pahang patients together with females from Selangor who had not yet been transferred were sent along. To accommodate the females I had put up a temporary ward of timber and attap with patient labour, and so overcame the difficulty.

The farms had done very well up to this, and I decided, as my leave would come due very early in 1915, to select a site for another farm to be built during my absence.

This meant more rambles with Mr. Ah Fatt in search of a site, which, in spite of a certain amount of discomfort, I think we both enjoyed. We had no adventures with living things worse than leeches, but one has to experience what the leeches of the Feredated Malay States can do to appreciate them at their full worth. Anyhow, one day, after several unsuccessful expeditions, we set out due west of the main buildings to a hill about half a mile away. After struggling through lalang and swamp, and passing what had been squatters' vegetable gardens with manure holes and wells, we came to a stream which we managed, after walking up and down the bank looking for a crossing, to get over. We then climbed the hill, and decided immediately that we had found the site for the farm. But to make the place habitable we should have to drain the swamp. We decided this could be done, though I don't think either of us realized quite what an undertaking it was going to be.

We then started back and crossed the stream lower down on a log—at least I did, for I had only just got across when I heard a crack and an exclamation from Mr. Ah Fatt, who was much heavier than I, and I looked round to see him nearly up to his armpits in the swampy stream. He got out safely and treated the whole thing as a joke in spite of his discomfort.

It was decided then that the stream should be cleared and straightened out down to the railway culvert about three-quarters of a mile from our boundary, and this was undertaken; but it turned out such a job that it was nearly nine months before it was finished and materials could be got across it to build the farm. The result was that the farm was not opened until after I got back from leave in September, 1915.

Meantime the building of the wards to accommodate the Straits Settlements patients was proceeding apace, and was well advanced when I left on leave in February, 1915. There is little to relate during the eight months from February to October, 1915; but I had scarcely returned from leave when I was informed that the Singapore patients were coming. We received a batch of them in November, 1915, and the remainder in January, 1916. The year 1916 saw, besides the admission of the second batch of Singapore patients, the transfer of patients from Johore—an arrangement which had been decided upon in 1915.

Another event of 1916 was the installation of a local telephone.

It had taken from the day I had first seen Tanjong Rambutan unti this to persuade certain people that a telephone was necessary even then the telephone was purely local, and we had no telephonic communication with the outside world until 1921.

A great disappointment awaited me on my return from leave in 1915, and this was to find that the whole of the 1915 vote of \$250,000 had been cut out of the estimates, which meant the loss of at least a year in the completion of our big programme. What I felt most was that this part of the programme included the new acute wards which we needed badly. Still, it could not be helped, as Government decided that they were not justified in spending so large a sum at such a time. Building was resumed the next year, but on a much smaller scale. In fact the big programme is not yet completed, as there are still two male wards and a female ward to be built.

The war years, of course, saw little progress in the way of building, though certain buildings had to go up. However, a great deal of draining and filling of swamp was done. This is of course an extremely necessary work in the Federated Malay States, as the only way to tackle malaria and many other tropical diseases is to attack the mosquito breeding-places. In 1916 three new wards were completed, and the acute ward and three other male wards commenced.

We were enabled to pull down two of the temporary wards owing to the completion of the three permanent ones, but still had two in use. The material from these wards was to have been given to the contractor in exchange for the labour of demolishing them, but I needed it to build the farms, and before the Public Works Department were aware of what was happening I had the wards down. The P.W.D. was much annoyed, but I had the material.

We still were pinched for room in spite of the fact that we had six farms scattered about the reserve. The year 1917 only saw one new ward completed, and it was not handed over until December.

The year 1918 saw the completion of the acute wards and another three male wards which had been commenced in 1916, and also one 32-bed female ward. The completion of these wards at last saw the disappearance of our overcrowding, which had continued from the opening of the institution.

The acute block consisted of two wards, a male and female, with a general admission room and small laboratory between. We also had hot baths attached, but the water supply was so bad that we had great difficulty in administering continuous hot baths, and this state of affairs continued until recently we got a satisfactory system. The acute wards are known as the Conolly Norman wards,

named after my first chief, Dr. Conolly Norman, of the Richmond Asylum, Dublin.

Our numbers had by now increased to 1,020.

In 1918 we were visited by the great influenza epidemic, which swept the country. We lost our second dresser, a man who learned all he knew of mental diseases at Tanjong Rambutan, and was the first man trained in the East to obtain the Medico-Psychological Association's Nursing Certificate, which he did in 1916. He was a man who played well; a man who knew his work and did it. In addition we had a fairly large death-roll amongst the patients, which worked out at 17 per cent., while out of 115 attendants attacked we only lost three. I attribute the low death-rate to early treatment, and not allowing risks in the way of getting up too soon.

We had a high death-rate, apart from influenza, and a low recovery-rate this year, due to being short of staff and to overcrowding, which did not disappear until the end of the year on completion of the new wards.

The year 1919 showed nothing very different from the war years, save that the maintenance rate went up with a bound, due to the fact that it was only at the close of the war that prices in the Federated Malay States soared. Though this year we had only one female ward handed over, still there were two more female and two male wards nearing completion, so that the bogey of overcrowding disappeared completely.

The year 1920 saw the completion of four male and two female wards, the reaching of the highest point by the maintenance rate, and the appointment of the first Assistant Superintendent. Prices became so high that we had to refuse to accept tenders, and decided to buy in the open market.

The Assistant Superintendent arrived in March, and was shocked with the climate. He was transferred from Uganda, which he describes as a health resort compared to Malaya. He returned to Uganda within four months, only a few weeks after I had gone on leave after four years and nine months since my last leave. By his departure we lost one of the best medical men it has been my fortune to meet.

By the end of 1921 our numbers had reached 1,313, including Federated Malay States, Straits Settlements—of whom we had about 200—Johore patients, and also patients from Kedah, which is one of the unfederated states, and sent patients for the first time in early 1921.

1922 was a red-letter year, as the institution then became the Central Mental Hospital instead of the Central Asylum. The term "lunatic" had been dropped by mutual consent some years before.

This change in name was due to the passing of a new Mental Disorders Enactment to replace the Lunacy Enactment. Thus ended a struggle which I had begun in 1911.

Amongst other things the new enactment accomplished was that patients were no longer "charged" with being "lunatics" before a magistrate in open court. Doubtful cases could be sent for observation, and voluntary boarders admitted.

In 1922 the Johore Government built a hospital for its own patients. I was not sorry to see the last of them, as they usually came in batches of chronics or dements.

In 1921 another Assistant Superintendent arrived from home. After two years he was transferred to Singapore to act as Medical Superintendent, and for eighteen months I ploughed my lonely furrow. I think I have now got an Assistant Medical Superintendent who is likely to be permanent.

During 1922, 1923 and 1924 building slowed down as there was little money to spare. The result is that there is a large programme of arrears to be made up. However, we enlarged the kitchen by adding a Mohammedan and a Hindoo kitchen and handed the original over to Chinese.

Those at home do not quite realize how important and difficult this matter is, where we in the Federated Malay States have such an extraordinary conglomeration of races and tribes and creeds. However, the new kitchen solved a difficulty, and for this I was extremely thankful. During the lean years I also got a new infectious disease ward built.

This consisted of building a covered way round what had been a fence enclosing a compound with two attap buildings on iron frames, which had previously served for infectious diseases. It will be remembered that it was here I made the first experiment in market-gardening. The fence forms the outer wall of this enclosure, and on three sides there are places where the covered way broadens out into wards 170 ft. by 50 ft., without walls, but with wide eaves coming well down to prevent rain beating in during wet weather. On the fourth side is the kitchen store-room, attendants' room, etc.

In the centre of this enclosure I have planted cocoanut palms which will give shade, but owing to their long, straight, branchless stems will not interfere with the free circulation of air. One of the sections is for cases of dysentery and one for phthisis, while the third is used for convalescents from dysentery, so that there is little or no risk of a carrier being sent back to general wards.

During all this time we continued to build farm-houses, and by the end of last year had ten of these, housing 200 patients in all. Three of these farm-houses are permanent buildings, and the other seven our own buildings of timber and attaps.

Anti-malarial work has, of course, also been carried on, and the scheme I originally started in 1914 to drain the swamp below the third farm, known as Horton Farm, has now been extended into a much more ambitious work. This aims at making a main drain through the whole reserve by straightening the course of the stream known as the Sungei Bulat.

In addition we are laying concrete inverts, and from these sloping sodded banks. No one who has not dealt with tropical rain-storms has any conception of the rush of water that comes down the stream during and after heavy rain. As this stream is cleared, deepened, and has the inverts laid, the drained section is rendered dry. It will take another three or four years to complete the scheme, but when it is completed I believe the reserve will be as dry on the surface as it would be possible to find any place. All this work is being done with our own labour, and some of our patients and attendants are becoming wonderfully skilled at it now.

After so much talk of bricks and mortar, it might be as well to say something of the patients. They are drawn from all the nationalities we find in the country, and these are legions. The majority are Chinese; next come Indians, then Malays and Javanese, with a few Japanese and Eurasians. These, again, are subdivided into innumerable races and clans which speak absolutely different languages. Though few speak it really well, Malay is the common language. I would be afraid to say how many divisions of Chinese are here, but certainly eight or ten, none of which understands the others' language, while amongst the Indians we have Tamils, Telugus and Malayalam from Southern India, all speaking a different language; and also various Northern Indian people, Sikhs, Punjabi Mussulmans, Pathan, an odd Afghan, and certainly to my knowledge one Goorkha, Brahmins from Calcutta and Benares, Bengali Mussulmans from various spots in Bengal, so that one can see what a positive babel we have. Of these various people we have admitted over 5,000 since opening, not including the original transfers, or patients from Straits Settlements, Johore or Kedah. We have discharged 2,704. Our recovery-rate for the last ten years was 42'11, and our death-rate 9'19.

The maintenance cost for 1924 worked out at \$174.23 per head per annum. Of course we have not to provide boots, socks, heating, and other things needed in England's cold climate. We supply a considerable quantity of food-stuff from the farms, and the maintenance rate is coming down steadily.

The food consists of rice, curry-stuff and meat, eggs or fish.

Twice a week everyone gets fresh fish, twice a week the Chinese get beef and the others mutton, twice a week the Chinese get pork and the others eggs, while once a week everyone gets salt fish. Kanjee, a sort of rice porridge, is supplied first thing in the morning, and two meals of curry and rice are supplied during the day.

We have our annual sports, when patients and attendants compete and have a thoroughly enjoyable day. Each nationality has a feast on its own special holiday. We have a gramaphone presented by Sir Edward Brochman on his retirement, which tours the wards; and when a travelling cinema or circus comes to the village one night is given up to our patients. We have our cricket and football elevens, on which anyone who is worth his place has his chance. We do quite well, and hold our own with all the local teams.

As to disease we find all the forms one finds at home, somewhat modified of course according to the nationality. The existence of general paralysis of the insane was denied until 1914, but there is not the slightest doubt of its existence. A strange fact about this is that we find it almost invariably in the Chinese. It is extremely rare in both Indians and Malays.

We have had a few cases of pellagra, but very few. Amongst the criminals we occasionally find a gentleman who has run amok, but this is rare now, chiefly, I am convinced, due to the fact that the amok is usually hanged to-day, and the potential amok likes the idea of being hanged as little as any other man.

There are other large problems, one of the most serious of which is the substitution of alcohol for opium amongst the Chinese. Unfortunately it has become the fashion to interfere with the pleasures of others, and the Chinese habit of opium-smoking has been condemned. Opium has been made more and more expensive, and has been put out of the reach of many. Naturally these people have looked for a substitute, and have found alcohol. They drink rank bad spirit, called, in most cases, brandy, and in a very short time find their way into Tanjong Rambutan. On their discharge, if they recover, like other alcoholics they start their old games and return very quickly.

It is a strange fact that in fourteen years I have been in Malaya I have only once seen a patient show opium deprivation symptoms.

There is one thing we have not yet got at Tanjong Rambutan, and that is accommodation for Europeans, though I have had several sent to me who had to be sent on to Singapore the next day.

At last it has been definitely decided to build first-class accommodation. The plans have been actually passed, and tenders called, and I hope when I return to find that work has actually been begun.

October, 1923, saw the retirement of my old friend Mr. Saw Ah

Fatt, our Inspector, who took into retirement the respect and good-will of everyone in the institution. He had completed forty years' Government service and was given the Imperial Service Medal, and never was this honour better deserved.

Mr. Ah Fatt had been, as I said before, my right-hand man from the beginning, and no one, save myself, can ever realize how much the development of Tanjong Rambutan owed to his brains and hard work.

The fourteen years from 1911 to 1925 have seen great changes at Tanjong Rambutan. The institution, originally built for 260 patients, now contains 1,760 patients, and has room for more. Inside the gates, including patients, staff, attendants and children, there are now over 2,000 souls. The blukar has been cleared, and where there was nothing but swamp, blukar and lalang, now there are parks, gardens, shady roads and paths, with ten farms scattered over the place.

I shall never forget the first time I saw patients being taken from the lunatic ward at Taiping to court to be charged "as lunatics." These men were handcuffed and under escort of burly Sikh policemen. That day, I am happy to say, has long since gone, and there is now no court or handcuffs, and people actually come in as voluntary boarders.

Whereas formerly, when patients were sent in, they were forgotten by their relatives, there is now scarcely a day when patients have not got visitors—the Malay people are becoming educated to the fact that insanity is a disease and not a crime.

We in the colonial service have an age-limit, and it is doubtful if I can serve long enough to see Tanjong Rambutan completed, but I hope to overtake the projected work before my retirement.

Some Aspects of Sociology and their Psychiatrical Application. (1)

By IAN D. SUTTIE, M.B., F.R.F.P.S.Glasg.

V.

On "Collective" and "Individual" Delusions.

The parallel between the phantasies and delusions of the individual and the myths and religious beliefs of the race is very close and extensive. In both cases we can trace the same "scotomata" to reality, the same logical inconsistency, and the same attempts to compensate for these defects (which of course are not acknowledged as such) by rationalization, by mystical interpretations, by appeals

(1) Continued from vol. lxix, p. 322.

to blind faith, and by the denial of the capacity of human understanding to criticize or even to comprehend these "mysteries." In both we find the same motives, yearnings and strivings at work, the same mechanisms, the same compromises and symbolic disguises. Delusion and traditional belief are equally subjective, equally expressions of "wish" rather than representations of real environment. For example, the belief in immortality as expressed in the various doctrines of heaven and the spiritualist "demonstrations" of the survival of personality, do manifestly and admittedly protect their holders from the pain of bereavement and from the realization of their own inevitable dissolution. It seems certain, too, that such a useful and protective function must greatly have favoured the development and spread of these ideas, and in my opinion it is the mainspring of their development. The analogy to certain psychotic "defence-formations" and phantasy gratifications seems to me very close and valid.

To a large extent, then, a comparative and genetic study of folk-belief may be expected to throw light upon the evasions and falsifications of reality achieved by the individual psychopath. The Freudian school has indeed for years explored this line of research, with most interesting results. Their curious obsession with the idea that individual phantasy is a direct inheritance of ancestral myth by organic channels (as the theory of mental recapitulation implies) has limited the fruitfulness of these comparisons.

In equating phantasies, etc., of individuals and of groups it seems to me we must make a considerable reservation, and that there is no full homology between the two cases. The delusions of the insane and the whims of the "crank" are developed in spite of, and often in antagonism to, the opinion of their fellows. delusions, on the contrary, were originally forced upon those who entertain them from their earliest years by the unquestioning faith of their fellows and superiors, and often by the most impressive ritual. Their acceptance, in fact, is inculcated rather than opposed by public opinion. The occasion to question a religious belief rarely arises, and when it does, the belief in question is supported by the whole weight of tradition, habit and example. The psychopath and the crank have not the same excuse for disregarding the evidence of their senses and reason, for in their beliefs they are actually at variance with society. The difference between them and the religious believer is that they think against, not with, the crowd.

Though delusion and myth bear the same relation to reality, and, regarded as psychological structures, are very similar, there is thus a very radical difference between the social dispositions of those who entertain the one and of those who entertain the other. Individual

and collective delusions differ radically also in regard to mechanisms and mode of development, e.g., the latter are the growth of generations and involve transmission from one individual to another—they are a growth in culture rather than in individual minds.

Subject to this qualification the comparison of delusion and folkbelief should be reliable and fruitful, particularly in demonstrating and defining that insusceptibility to social suggestion so characteristic of the psychoses.

The Phosphorus and Calcium Content of the Blood-plasma and Cerebro-spinal Fluid in the Psychoses. By H. A. Scholberg, M.B., D.P.H., and Edwin Goodall, C.B.E., M.D., B.S., F.R.C.P., Cardiff City Mental Hospital.

This work was carried out mainly with financial assistance from the Medical Research Council, to whom the results have been communicated, and to whom our thanks are due.

Having regard to the paucity of information on the subject of the phosphorus and calcium-content of blood and cerebro-spinal fluid in the psychoses, and to the consideration that at this mental hospital a research laboratory in chemistry is available, it seemed desirable to investigate these matters.

As regards phosphorus, practically no work appears to have been done in psychotic cases and little or no information is available. As regards calcium, a few references to the estimation of this substance in cases of mental disorder have been found in the literature.

An exhaustive survey by Dr. R. V. Stanford, Research Chemist at this institution, who is assisted by Mr. A. H. M. Wheatley, of methods hitherto employed for the estimation of phosphorus and calcium in the fluids concerned, with actual testing of the most promising ones, made it clear that accurate methods would have to be devised before this investigation could commence. This necessary preliminary work has absorbed a great deal of time. Finally, as a result of the experience gained, we were in a position to apply the methods evolved in our chemical laboratory. It was decided that the time at our disposal could be best employed by confining our investigation to the estimation of total and inorganic phosphorus and calcium in the plasma, and of inorganic phosphorus and calcium in the cerebro-spinal fluid. Dr. Stanford's experiments established that, as regards the latter fluid, inorganic phosphorus is practically identical with total phosphorus. As regards

normal figures for phosphorus in either fluid, and figures for phosphorus in cases of mental disorder, it is considered that the methods which have been hitherto used in estimating phosphorus are of questionable accuracy, and that no reliable figures are available.

With regard to normal figures for calcium in serum, we have found the following references: Weston and Howard (I) (technique of Kramer and Tisdall), give the calcium-content of serum (apparently normal) as 9-12 mg. per cent. Tomasson (2) states that, "like the majority of others," he finds the normal value of total calcium in serum, with de Waard's method, 9.4-11.3 mg. per cent., mostly towards the upper limit. Only exceptionally in normal persons did he find values less than 10.66 mg. per cent. We are informed by Dr. Stanford that Hirth and Klotz (3) have shown that by de Waard's method too high results are of necessity obtained. De Wesselow (4) gives figures for calcium in the serum of four cases (the method of Kramer and Tisdall); these vary from 9.7-10 mg. per cent. Kramer and Tisdall (5) found a calcium-percentage in the serum of ten normal adults of 9.5-10.3 mg. per cent. Kramer and Howland (6)—seven normal adults—give figures of 0.3-0.0 mg. per cent., Stewart and Haldane (7)—three normal adults—from 9.5-9.6 mg. per cent. As regards normal calcium-content of the cerebro-spinal fluid, Macdonald Critchely and E. O'Flynn (8) quote Kummer and Minkoff as having examined four specimens of cerebrospinal fluid from normal persons, and having found 5-5.2 mg. per cent. Weston and Howard (cited above) state that the calciumcontent of the cerebro-spinal fluid (Kramer and Tisdall's method) is generally accepted as 4.5-6 mg. per cent.

As controls to our work, we took six healthy patients, free from all acute mental disorder, and judged to be practically normal persons (see particulars opposite their numbers in accompanying table). The results in these were obtained in the plasma and the cerebro-spinal fluid. With the exception of the upper limit figure cited by Weston and Howard for serum and cerebro-spinal fluid, and the like obtained by Tómasson in serum, our figures for calcium in plasma and cerebro-spinal fluid in these controls compare closely with the normal figures above cited.

Before giving our results the following observations from the literature may be cited: Critchely and O'Flynn (quoted above), examined the calcium-content of the cerebro-spinal fluid in ten cases of neuroses with no physical signs of organic disease in the central nervous system. They found 6.6 mg. per cent. Weston and Howard (cited above) examined the calcium-content of serum and cerebro-spinal fluid in 17 cases of mania and 10 of depression (phases of manic-depressive insanity). They found as follows:

## Average m.g. per cent.

		_~_					
	Serum.		Cerebro-spinal fluid.				
Manic phase.	10.4	•	5.2				
Depressed phase	10.6		5.4				

The average amount of calcium was, therefore, practically the same in each phase. Individual variations from the average were small. There was no variation from the normal in either fluid.

Hamilton (0) gives figures for inorganic phosphorus and calcium in serum and cerebro-spinal fluid in 16 epileptics. The former were obtained by Briggs's method. As to this, Dr. Stanford states that the degree of accuracy depends upon the details of technique, as to which no information is given. Calcium was determined by a modified Kramer method; on the same authority we learn that the details given are insufficient for forming an opinion as to probable accuracy. Hamilton's figures for inorganic phosphorus in these epileptics are 2.6-6.0 in serum, 1.6-4.0 in cerebro-spinal fluid. and for calcium, 9.6-12.8 in serum and 4.4-6.6 in cerebro-spinal fluid. The upper limit of these figures is high compared with those obtained by us, whether in controls or in acute mental disorders. Most of the samples in Hamilton's cases were taken between seizures. but in the exceptions, in which the fluids were removed during or just after seizures, the values obtained showed no material difference from the others.

Tómasson (cited above) examined serum for calcium-content in about 200 psychical cases in a state asylum: 80 showed clear deviations from the normal, by way of increase; in 38 there was more than 12 mg. per cent., in 42, 11.4-12 mg. per cent., 22 others showed low normal values. As to these results, however, see remark above re the method employed. He found no certain agreement of calcium deviations with specific psychical states; but deviations seemed to occur especially in manic-depressive conditions. Some cases of circular insanity also gave differences in different phases (rise of calcium in maniacal, fall in depressed Deviations of calcium-value were also found in some "functional" states and some cases of schizophrenia. The deviations referred to, he states, were unconnected with motor agitation. He adds that, as Glaser's work (which he cites) shows, his own work gives the impression that perhaps a relationship exists between serum calcium-content and certain psychical states. observations in which per-oral and intravenous calcium were given seem to show that certain psychical states are perhaps influenced by such medication. His inquiry is being continued.

		Remarks.		Works on land.	Admitted 8.5.25. Dis-	charged 28.5.25. Kent back for test.	Fluids tested be-	tween 27.5.25 and	29.5.25. Worked in laundry.	Discharged 25.6.25.	lest done 3.0.25. Discharged "re-	lieved" 23.7.25.	Test done 3.0.25. Discharged 24.8.25.	Test done 3.6.25.	Works on the land.
	Cerebro-spinal	Cal- phos- cium. phorus.	mg. per c.c.	4.8 1.62	1.35				1.27		1.27	,	1.33	3	2.0   10.1   5.1   1.46
	Cereb	Cal-	rog.	<b>*</b>	9.4				6.4			,			2.1
		Total phos- phorus.		5.6	11.3				3.8 11.2		10.2		10.8	1	1.01
	Plasma.	Cal. Inorganic Total phos-	mg. per c.c.	60	3.5				89.		2.7		. 7	,	
		Cal-	"	9.3	6.6				1.01		10.4		0.01	)	10.0
Six Control Cases.	Dheelo	condition.		Good	Rather obese,	but good			Good		•			2	•
		Mental state.		Secondary mental Good enfeeblement	Bout of alcohol				Mild congenital	)	Paranoidal type ado-	lescent dementia	Secondary dementia	(not pronounced—	quiet) Dementia
	200	date examined.		Chronic (admitted	Sane shortly after	admission			Congenital		A few years	•	Some wears		9 years
	2	attack.		ı	1				1		I		١		1
		of Sex. Age.		34	4.5	- <del></del>			91		27	•	0	<u> </u>	1
		ž,		×.	Œ,		-		땨		Ä		>	:	₹.
	N.	case.		H	61				~	,	7	•	v	•	9

Repetition (2 months later).

1.59 1.32 1.28

5 .2 5 .1

8.8 3.3 12.4 No blood available 9.2 3.4 10.4

Stupor at adolescence Good

About 6 months Some years

: :

4 4 2 6

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36

Repetition (44 months

1.36

0.4 2.3

6.5

Good

Ditto

melancholia

Hypochondriacal

3-6 weeks

Ist

4

X.

~

1 · 36

9.8 11.2

Fair (obese)

later).

Convalescent (14

1.52

5.7 2.1 6.4 9.9 6.4 --

0.11 10.7

10.3 6.6 20.2

Good

Passive melancholia Ditto

9 months 3 months Unknown

R. M. M.

32 24 25

Fair :

agitation Ditto

1.6 10.7

l

Post parturient.

2.24

3.4 | 11.3 | 6.7 |

0.11

Melancholia with | Poor

| About 14 days

ıst

9 | F. | 56

Cases of Mental Disorder.

months later).

_																										
	!	Repetition (4 months	- margh:	Repetition (31 months	- 'alei).		Repetition (34 months	later).	Somewhat cyanosed	extremities.  Repetition (nearly 2	months later).	Repetition (3 weeks	later).	Convalescent (21	months later), but relapsed it days	later.	-	Repetition (14 months	later).	Repetition (3 months	later).		1	Repetition (14 days	1	Convalescent (3 weeks later).
_	1.33	1.24	1.27	1.46	1.50		1.48	1.48	1.28	1.31	1.35	1.32	1.23	1 · 28		1.27	1+1	1 · 30	1.93	1.76	1.53	1.26	1.71	1.49	09.1	1.67
	5.3	4.3	3.1	5.2	6.3		3.4	5.5	8.0	5.5	8.0	4.7	2.0	\$.4		5.7	8.8	2.5	6.4	.5	•	2.4	5.3	2.4	5.3	8.0
	1.11	8.7	8.7	0.11	6.8		10.2	10.5	11.5	12.7	10.0	6.11	12.1	15.5		12.3	12.4	6.01	13.2	13.2	13.2	6.01	8.6	10.1	8.8	10.5
	0	2.7	2.9	7.7	2.3		3.5	3.6	3.4	3.1	3.8	3.8	3.4	4.5		<b>†</b> .	2.0	3.8	3.7	4.8	3.4	1.1	3.4	<b>*</b> . *	60 60	3.8
	0.11	°.	0.01	9.6	6.6		5.6	5.6	8.6	6.5	8.5	6.8	9.6	8.6		8.01	0.01	6.6	<b>7</b> .6	8.6	10.3	8.6	<b>†</b> .6	<del>*</del>	6.6	6.6
•	Fair	:	Good	=	Reduced		2	Fair	=	Good	Fair	:	:	Good		Fair	:	:	Reduced	:	:	÷.	G00d	:	Fair	Good
	Adolescent insanity Fair (hebephrenia)	Ditto	•	•	Adolescent insanity (hebenhrenia)—	marked hallucina-	Ditto	Emotional disorder	Melancholia; stupor	Ditto	Melancholia at ado-	Ditto	Acute confusion at			Ditto	Melancholia, stupor	910	Acute confusion	Ditto	•			•	Confusion + depression (alcohol)	
	:		Unknown		7-8 years			5-6 months	About 1 month		About 2 months		A few weeks			5 weeks	About 14 days		5-6 months		Said to be I week	7-6 months	** months		9-10 months	
	•		Unknown		ıst			:	2nd		ıst		Probably 4th			ıst	Zug		ıst		2nd				:	
	56		27		22			23	25		78		75			22	<b></b>		43		84	2 %	3		9	
	ㄸ.		ž		Ä.			×	다.		Ä.		땨			tr. 17	:		Œ,		<u>د:</u> >	ĒŒ	:		ž	
	=				19			27													<b>∞</b>	_				

	Remarks.		1		months later); dis- charged on trial	10.11.25.	1	1	Repetition (3 weeks	Repetition (3 days		Repetition (3 weeks	Having fits the day before, the day of.	and the day after fluids removed.	= Up and about.		I	I	1
Cerebro-spinal fluid.	Inorganic phos-	mg. per c.c.	61.1	1.23			1.31	1.44	1.17		1.55	1.62	1.33		89.1	1.59	61.1	19.1	1.34
Cereb	Cium.	E	2.4	2.0			٥.	2.0	4.8		2.4	2.0	2.5		5 . 1	5.2	5.4	5.5	4.9
	Total phos- phorus.	١.	12.1	13.8			10.3	10.7	10.1		12.0	8.11	4.6		11.3	0.6	6.6	5.11	<b>†.0</b> I
Plasma.	Inorganic phos- phorus.	mg. per c.c.	3.0	3.6			0.0	4.5	3.4		3.3	e e	9.1		3.6	3.0	6.6	3.5	3.4
	Cing.	)	6.6	6.6			4.6	10.4	1	2.6	6.6	9.6	5.6		4.6	5.01	10.4	9.6	6.5
i	condition.		Reduced	Good			:	•	•		Reduced	2	Good		Remission.	Reduced	Good	Reduced	Good
	Mental state.		Mania-melancholia			,	Mania-melancholia	Acute mania (mania-	metanenona) Ditto		•	•	Epilepsy (petit mal)		Dementia paralytica	Ditto (advanced)	Acute hallucinations and delusions	Dementia (with	apnasia) Unsystematized delu- Good sional insanity
:	Duration of malady at date examined.		Probably a few			,	ı week	About I week			About 3 months		Years		Some 6 years	At least 12 months	Indefinite; acute exacerbation a	week ago 5-6 weeks	"About I week"
;	No. of attack.		5th since	2		,	3rd	ıst			:		:		•	:	: 2	2nd	ıst
	Sex. Age.		36				47	21			53		21		37	34	86	\$	33
	Şex		ㄸ				দ.	×.			Ä.		M.		×	×	×	я.	tr.
ž	of Case		71			•	18	31			33		30		16	14	13	15	17

Tómasson states that Glaser was able, by quietening excited patients by hypnosis, to lower the calcium content of the serum. It has been recommended that calcium be given in states of agitation (mania, etc.), and certain observers have claimed that this has a sedative effect. This empirical measure is not consistent with the observation of Glaser, nor with that of Tómasson, according to whom there is an increase of calcium in maniacal states; nor yet with the statement of Baráth (10), who, investigating the effect of calcium in human beings, reports that after intravenous administration of calcium a state of excitation (increase of excitability) occurs in both portions of the vegetative nervous system, as shown by the behaviour of the blood-pressure, pulse and oculo-cardiac reflex.

The patients examined by us were on the following diet for 24-48 hours, and then fasted from 6 p.m. till the fluids were withdrawn about 10 a.m. on the following morning:

Breakfast.		i	Dinnes	٠.				Tea	ı <b>.</b>
Bread . { M. F. Bacon	2 ,,	Meat (co Potatoes Peas Bread	•	:	6 2 2	" "	Margarine		M. 8 oz. F. 6 ,, . 1 ,,

Up to the present we have examined, in addition to the 6 controls referred to, the plasma and the cerebro-spinal fluid in 31 cases of certified insanity in the Cardiff City Mental Hospital. The results are set out in the accompanying table.

The table shows that the figures obtained for inorganic phosphorus and calcium in plasma and cerebro-spinal fluid in the various cases of insanity dealt with do not, considered as a whole, deviate from such control (normal) figures as are available.

In 12 cases the total phosphorus in the plasma is on the high side  $(12\cdot0-15\cdot5)$ , in 4 on the low side  $(8\cdot5-8\cdot9)$ .

Of the figures on the high side, one, 15.5, is obviously abnormally high, but equally obviously may be due to experimental error.

The urine was examined in 27 of these cases of mental disorder (in 14, a 24 hours' specimen). It was normal in 14 cases. In 7 phosphates were present, but in none of these was the total phosphorus high in the plasma. Urates were present in 4 cases. A trace of albumen was present in 2.

It was explained at the outset that much of the time at our disposal has gone in the devising of accurate methods, and therefore we have not had sufficient (in the year for which our report to the Medical Research Council fell due) in which to apply these methods

to cases of disease. In order thoroughly to do so, and give fuller value to this work, we feel that more controls should be obtained (a difficult matter), that more cases of acute and recent psychoses of various kinds are required, and that the examination of these cases on repeated occasions and on their convalescence is necessary.

The technical work of Dr. Stanford and Mr. Wheatley, of our chemical research laboratory, upon which the above information is based, is contained in the following papers, published in the *Biochemical Journal*, vol. xix, No. 4, 1925:

- (a) "The Estimation of Phosphorus Compounds in Blood."
- (b) "The Distribution of Phosphorus Compounds in Blood."
- (c) "The Estimation of Calcium Compounds in Blood."

Our thanks are due to our colleagues, Drs. Walker and Grossman, for help in the matter of withdrawal of the fluids necessary for the work detailed.

# References. .

- (1) Archives of Neurology and Psychiatry, August, 1922.
- (2) "Vorl. Mitteilung," Klin. Woch., November 4, 1924, No. 45
- (3) Compt. Rend. Soc. Biol., 1923, lxxxix, p. 49.
- (4) "The Inorganic Constituents of the Blood in Certain Pathological Conditions": a report to the Medical Research Council, Lancet, May 31, 1924.
  - (5) Journ. Biol. Chem., 1921, xlvii, pp. 475-481.
  - (6) Ibid., 1920, xliii, pp. 35-42.
  - (7) Biochem. Journ., 1924, xviii, pp. 855-7.
  - (8) Brain, 1924, xlvii, No. 3.
  - (9) Journ. Biol. Chem., 1925, lxv, p. 101.
- (10) Zeitschr. f. d. ges. Exp. Med., Bd. xlv, heft 5-6, 1925. (Abstracted in Klin. Woch., No. 37 of September 10, 1925.)

The Cerebro-spinal Fluid in Encephalitis Lethargica. By ALLEN HANCOCK, M.C., M.R.C.S., L.R.C.P., D.P.H., D.P.M., Assistant Medical Officer, London County Mental Hospital, Bexley.

ENCEPHALITIS lethargica, or epidemic encephalitis as it is now usually called, is becoming more generally recognized throughout the world, and while diagnosis is usually easy in those cases with a clear history, and who show the "encephalitic syndrome" to a marked degree, much confusion has arisen in the case of some patients who have shown clinical features which have led observers to arrive at a diagnosis of this disease when later investigations have shown that this conclusion has not been a correct one. On

the other hand, some cases suffering from encephalitis lethargica, in one of its many clinical forms, have been erroneously diagnosed as suffering from some other disease or, perhaps, the nature of the complaint has remained obscure. Literature on the subject contains many references to such doubtful cases, and among others which have presented difficulties from their clinical picture, mention has been made of acute anterior poliomyelitis, tuberculous meningitis, cerebral syphilis, general paralysis, disseminated sclerosis, alcoholic poisoning and cerebral tumour.

The examination of the cerebro-spinal fluid is everywhere fully recognized as being of the greatest importance in all such cases, and it is for this reason that it is felt that the following results, obtained from a series of cases of epidemic encephalitis, may be of interest.

The table set out below shows the findings obtained in 34 cases of this disease. The work was done in the Pathological Laboratory of the Maudsley Hospital, and to Dr. Golla, the Director, I am indebted for permission to carry out the examination, and for his help in obtaining cases. These were patients who may be regarded as having reached the chronic stage of their disease, and who show periods from the onset varying from five years to four months, the majority being from nine to twelve months. There are 10 females and 13 males in the series, and their ages range from 11 to 50 years. The table shows the various clinical types of cases examined. Of the 23 cases examined, 10 were patients in mental hospitals, while 7, although not certified, were either in-patients at the Maudsley, or were attending the Out-patient Department of the same hospital. 4 were from hospitals other than mental hospitals.

The lumbar route was in all cases employed. The physical characters of all the fluids did not show any abnormality, being clear and colourless, and only in 3 cases did it escape in increased pressure. The cell-count showed no increase above 5 cells per c.mm. in any of the fluids.

Pandy's test was positive in only one case; this was one of five years' duration, and was of the Parkinsonian type; 2 other cases showed faint reactions, but 20 of the series were negative. Only 5 cases showed a protein content above 40 %.

The Wassermann reaction was in all cases negative.

The colloidal gold reaction (Lange) showed some change in 10 of the 23 fluids examined. These changes were in all cases slight, were usually to "I" or "2," or in I case only was a change up to "3" shown. The changes that did occur will be seen in the table to have taken place in two or three of the middle tubes, but from these results there is no reason to believe that in this disease any

Case. S	-										
	Sex.	Age.	Pressure,	Pandy's test.	Total protein, Wassermann mgrm. %.	Wassermann reaction.	Colloidal gold reaction, Lange,	Sugar % (o'o4 to o'o6 % normal).	Chloride % (o'70 to o'76 % normal).	Duration,	Clinical type.
	1.	31	:	1	35	Negative	Nil	:	:	15 months	Parkinsonian.
	Z.	30	:	+	200	•	00001110000	0.055	0.725	5 years	2
	٦.	91	:	1	9	:	0000111100	0.082	0.725	I year	2
_	X.	12	Normal	1	35	:	Nil	80.0	0.73	4 months	•
	굔.	25	:	1	45	:	1112332110	:	:	12 ,,	Depressed.
	균.	13	:	1	35	:	Nil	0.071	:	13 ,,	Lethargic (naughty child).
	т.	12	:	1	35	:	:	120.0	:	. 6	Parkinsonian.
	<del></del>	91	:	Faint	45	:	:	190.0	0.703	.:	:
	Z.	48	:	:	50	:	000011000	0.078	:	. 6	Depressed.
	Z.	15	:	١	35	:	000011000	:	:	" 11	Parkinsonian.
=	Ä.	19	:	1	35	:	Nü	0.02	12.0	3 years	₹
_					_						type.
	×.	56	:	i	35	:	0122110000	:	:	ı year	:
	٠ <u>.</u>	70	:	!	35	:	00011100	0.057	0.72	9 months	" suicidal.
_	<u>ь:</u>	21	:	1	35	•	Nii	0.063	269.0	•	:
_	굔 -	35	:	ı	35	:	:	0.021	069.0	41	:
	표	36	:	1	35	:	•	90.0	999.0	3 years	:
	X.	::	:	1	35	:	:	0.053	0.202	9 months	Naughty child, suicidal.
_	Z.	23	Increased	:	:	:	0000221000	0.053	0.692	3 years	Parkinsonian.
	¥	21	•	1	35	:	00000100000	0.053	809.0	1 year	8
	Z.	20	Normal	:	:	•	0000112110	0.055	0.682	5 years	•
	Z.	30	Increased	1	35	•	Nii	0.063	0.687	12 months	Apache.
	Z.	43	Normal		35	:	:	<b>*90.0</b>	0.710	12 ,,	Sleepless.
	M.	56	•	1	35	:	=	990.0	89.0	4 years	Parkinsonian.

Cases 1-4 not certified. Cases 5-11 not certified, but were under treatment at the Maudsley Hospital.

Cases 12-23 certified insane and in mental hospitals.

Character of fluid: Clear and colourless in all cases. Cells: In no case above 5 per c.mm.

definite type of curve is usually obtained which is of value from a positive point of view. On the other hand, this test, like the Wassermann, by showing a negative result, will eliminate other diseases which may be suspected when making a diagnosis in doubtful cases.

The sugar content was estimated in 19 of the fluids, the method employed being Calvert's blood-sugar method, adapted for cerebrospinal fluid. The results here support the view that an increase in sugar in the cerebro-spinal fluid is frequently found in epidemic encephalitis. It was found that in 58% of the cases the sugar present was above .06% In 5 of these it was above .07%, and in 2 of the fluids a content above .08% was found. In no case was the figure lower than .05%. Although the sugar content varies in many conditions, the importance of these figures in the disease under discussion lies chiefly in the fact that the sugar does not in any case show a decrease in amount, as is the case in tuberculous meningitis, which may present a clinical picture similar to that found in encephalitis lethargica.

The chlorides present were estimated in 16 of the cases. In no case was any great variation found, and none were raised above ·76 %, which has been regarded as the maximum normal figure. If the lowest normal figure is taken as ·70 %, it is found in this series that a figure below this is shown in only 9 of the cases, and in these there is only a small diminution, which may indicate a slight meningeal infection, but in none is it found below ·60 %, as is usually the case in tuberculous meningitis. The chloride estimation, therefore, as in that for sugar, may give results helpful in diagnosis when the clinical findings are common to other diseases.

The conclusions arrived at from the fluids examined are:

- (1) Examination of the cerebro-spinal fluid in doubtful but suspected cases of encephalitis lethargica is of the greatest importance.
- (2) The constant negative findings of the Wassermann reaction, Pandy's test, Lange, and an absence of increase in the cell content will exclude many conditions which may give rise to confusion.
- (3) When a negative Wassermann reaction and a negative Lange has been found, the sugar and the chloride content of the fluid may be of value in differentiating epidemic encephalitis from other diseases, especially tuberculous meningitis.
- (4) It is essential that the methods employed should be the same in all cases.

The Cholesterol Content of the Cerebro-spinal Fluid in Certain Mental Diseases. By E. G. T. POYNDER, M.R.C.S., L.R.C.P., D.P.M., Assistant Medical Officer, Long Grove Mental Hospital, Epsom, and J. Russell, B.A., B.Ch., D.P.M., Medical Officer, Mental Hospital Service of New Zealand.

THE presence of cholesterol in the cerebro-spinal fluid has been the subject of investigation by various observers. The following communication is based on a series of observations conducted at the Pathological Laboratory of the Maudsley Hospital, on specimens of cerebro-spinal fluid obtained from patients in the mental hospitals of the London County Council.

Metrezat, writing on Le Liquide cephalo-rachidien normal et pathologique, states that cholesterol has been found by several authors in the hydrocephalic, and is only found in traces in the normal state in the cerebro-spinal fluid.

Mott, in 1900, failed to find it in normal individuals, but in a series of investigations on the presence of this body in the different fluids of the organism, Chauffard, La Roche and Grigant have found it in very small amounts.

Pighini in his work on this subject has found an increase in certain cases, and considers its presence to be significant of an organic disease of the central nervous system.

Pighini, in 1909 and 1910, came to the following conclusions with regard to the presence of cholesterol in the cerebro-spinal fluid: In 25 cases of general paralysis he obtained a positive result in 24. In 22 cases of epilepsy he found 12 positives. In 7 cases of dementia præcox he found 5 positives. In the cases of epilepsy the strongest reactions coincided with patients having repeated fits. In those of dementia præcox it was found principally in the acute phases of early years, and in the catatonic stage. In cases of manic-depressive insanity, pellagra, arterio-sclerosis, acute and chronic alcoholism, no cholesterol reaction was obtained.

Mott, in 1910, confirmed the presence of cholesterol in the cerebrospinal fluid in general paralysis and dementia præcox.

Chauffard, La Roche and Grigant found that in the pathological state the sum-total of cholesterol remained the same as in the normal state. In general paralysis, tabes, tubercular meningitis and dementia, the total cholesterol remained either normal, or only showed a very slight increase.

Chauffard on his part, from studies of choline and of the phosphates, is sceptical as to the passage into the cerebro-spinal fluid of the products of disintegration of the nervous tissue. Cholesterol

being a colloidal substance, its increase in the blood in the course of various pathological processes would not determine its passage into the cerebro-spinal fluid; he considers, then, for these reasons the presence of cholesterol in appreciable quantities in the cerebro-spinal fluid and its increase in the pathological state as very unlikely. He agrees in this with Grigant, who failed to find cholesterol in the cerebro-spinal fluid from pathological cases.

In an article published by Goebel in the Societé Polonaise de Biologie, xc, 1924, he found that in general paralysis there was always an increase of cholesterol in the cerebro-spinal fluid. In 11 cases of this disease the total of cholesterol was '005-'051 grm. per 100 c.c. At the same time he found a hypocholesterinæmia in 4 cases, '208-'27 grm. of cholesterol per 100 c.c. of blood. He deduced that this increase of cholesterin in the cerebro-spinal fluid is directly related to the degenerative chemical changes which take place in the brain during this disease. He considered that the increase of cholesterol in the cerebro-spinal fluid is referable to the pathological changes occurring in general paralysis in the vessels which play an important part from the point of view of the passage of cholesterol from the blood into the cerebro-spinal fluid, and again in the membranes of the brain.

In cerebral syphilis he finds similar results, and assumes that cholesterol is able to pass directly from the nervous tissue into the cerebro-spinal fluid.

He also confirms Pighini's results in dementia præcox and in epilepsy. Just previous to the fit cholesterol is present in increased amount, but is found only in traces in the free periods.

His conclusion is that there is no connection between the increase of the cholesterol content in the cerebro-spinal fluid and the Wassemann reaction.

The following experiments have been performed in an endeavour to find out whether the amount of cholesterol found in certain mental diseases bears any relation to the destruction of brain-tissue, or to changes, probably of an inflammatory nature, in the meninges.

It was first attempted to demonstrate the presence of cholesterol in the free state in the cerebro-spinal fluid. The proteins were precipitated by the addition of phospho-tungstic acid, after which practically no trace of cholesterol could be demonstrated in the filtrate in fluids with either positive or negative reaction to the Wassermann test, on account of the occurrence of a yellow coloration when the Liebermann reaction was performed. For this reason we abandoned the tungstate method in favour of alcohol as a protein precipitant.

10 c.c. of cerebro-spinal fluid were heated with absolute alcohol

till the proteins were precipitated. The precipitate was filtered off, and the filtrate evaporated to dryness and extracted with hot chloroform in a reflux condenser.

The presence of cholesterol in traces in the filtrate was demonstrated only in cases of general paralysis showing a positive Wassermann reaction, and on extracting the protein precipitate with chloroform the presence of further faint traces of cholesterol was still detected. This fact suggested that part at least of the cholesterol in the cerebro-spinal fluid occurred in combination with the protein. It was therefore attempted to break up the protein precipitate and thus render the extraction of cholesterol complete.

To 10 c.c. of cerebro-spinal fluid 25 c.c. absolute alcohol were added with 10 c.c. of N/10 KOH, and heated on the water-bath to dryness; then the residue redissolved in 25 c.c. absolute alcohol was neutralized by 10 c.c. N/10 H<sub>2</sub>SO<sub>4</sub>. The solution was evaporated to dryness as before; the residue was further dried in a hot-air cupboard to eliminate all traces of water. The dry residue was carefully scraped up and extracted with hot chloroform for two hours in a reflux condenser.

Further extractions of this residue beyond this time were made, and in no instance was any more cholesterol demonstrated.

The actual technique of the final extraction was carried out in the following manner:

The dried residue was placed in a receptacle made by folding a small filter-paper, which was then placed in the neck of a hard glass tube with a standard 7 c.c. bulb in which was previously placed 5 c.c. chloroform. In the opening of this tube was fitted a cork and long glass tube of about 3 ft. which acted as the reflux condenser. The glass bulb was inserted in an electrically heated bath and kept at 80° C. for 2 hours, after which time it was removed from the bath and allowed to cool.

The extracted cholesterol solution was made up to 5 c.c. by adding chloroform and transferred to a test-tube of small diameter. The Liebermann test was performed by adding 2 c.c. of acetic anhydride and '1 c.c. concentrated H<sub>2</sub>SO<sub>4</sub>. The tube was then placed in the dark for half an hour to allow the colour to develop.

Standard solutions of cholesterol in chloroform were made up in tubes of similar diameter and the colour reaction obtained in the same way. By comparison with the standards it was found that differences of 1 in 10,000 could be detected by the naked eye up to dilutions of 1-60,000.

The total determinable cholesterol of the cerebro-spinal fluid apart from the faint traces in the protein filtrate was found, therefore, in the extraction of the protein precipitate.

The following tests were carried out on all the cerebro-spinal fluids: Wassermann reaction and Pandy's test for proteins. Any fluids which were detected to contain blood-corpuscles after centrifugalization were eliminated.

General paralysis.—The cerebro-spinal fluids were taken from patients who showed both early and advanced physical signs of this disease. The cerebro-spinal fluids of 38 cases of general

paralysis were investigated. All the fluids gave a positive Pandy test for albumen. Twenty-six of the fluids gave a Wassermann of +40+. Cholesterol was found in the concentration of approximately I in 60,000 in 22 of this class, one case showed a concentration of I in 50,000, one case of I in 40,000, one gave only a trace of cholesterol, and one showed no cholesterol. Five fluids gave a Wassermann reaction of +20+. Of these, one showed cholesterol in the proportion of I in 60,000, one fluid gave I in 30,000, two I in 25,000, and one showed only a trace of cholesterol.

Seven fluids gave a Wassermann reaction of +8+. Of these, one fluid showed cholesterol in the proportion of I in 60,000, two in I in 30,000, four showed a trace only, and one showed no cholesterol.

There appears, then, to be no relation between the amount of cholesterol present and the intensity of the Wassermann reaction. No relation between the amount of cholesterol and the clinical state could be discovered.

Dementia præcox.—The 15 cases showed very marked clinical features of this disease, and also a perceptible degree of mental deterioration. In 8 cases catatonic symptoms were prominent, including one case of flexibilitas cerea. In only 3 cases was there a positive Pandy reaction, and it was in these cases that a faint trace of cholesterol was demonstrated.

In dementia simplex the subjects were of advanced age with a marked degree of arterio-sclerosis.

In no instance was a positive Pandy obtained and in all cases cholesterol was deficient.

Epilepsy.—In epilepsy the cases chosen were those under certificate for a considerable period and who suffered from major fits, frequent in nature, and at the same time showing marked mental disturbance as the result of the fit.

Their usual mentality was one of an obvious degree of mental deterioration, and most cases showed stigmata of degeneration.

The Wassermann reaction was in every instance negative, and in only one case was the Pandy test positive.

These fluids were withdrawn in the quiescent period.

In 4 cases there were definite traces of cholesterol, and in no case was there a positive Pandy albumen reaction.

Disseminated sclerosis.—One case in which the Wassermann reaction and Pandy were negative gave a negative result to cholesterol.

Post-encephalitic paralysis agitans.—One case gave a negative Wassermann and Pandy, and no trace of cholesterol could be demonstrated.

LXXII. 5

#### Conclusions.

In cases of general paralysis, cholesterol was found in the cerebrospinal fluids in measurable quantities in 30 cases. A trace of cholesterol was present in 6 cases, and no cholesterol could be detected in 2 cases.

No measurable amounts of cholesterol were found in fluids from cases of dementia simplex, dementia præcox or epilepsy with insanity. Traces occasionally found may be due to contamination with blood, as, though every precaution was taken, a very few red corpuscles would have sufficed to give these exceedingly faint reactions.

The cholesterol of the cerebro-spinal fluid of general paralytics appears to be combined with the albumen present in the fluid, only very faint traces existing in the albumen-free filtrate.

In conclusion we desire to express our thanks to Dr. Golla, Director of the Pathological Laboratory, and to Mr. S. A. Mann, Assistant in the Laboratory, for their advice and assistance in this research.

#### REFERENCES.

Mestrezat and Mott.—Le Liquide Cephalo-Rachidien Normal et Pathologique, 1912, p. 145.

Pighini-Goebel.—Société Polonaise de Biologie, xc, 1924.

Chauffard, La Roche and Grigaut.—Comptes Rendues de la Société de Biologie, 1911, lxx, séance du 27 Mai.

Mott.—Op. cit.

Acquired Immunity to Malarial Inoculation (1). By J. Ernest Nicole, L.M.S.S.A.Lond., Senior Assistant Medical Officer, Lancashire County Mental Hospital, Winwick, and John P. Steel, M.B., Ch.B.Edin., Assistant Medical Officer to the Hospital.

In connection with the malarial treatment of general paralysis of the insane in this hospital, we have endeavoured to produce a second series of malarial rigors in such cases as had not shown sufficient mental or physical benefit after a first infection terminated six or more months ago.

From the figures published from time to time by the originators of the treatment, we were led to believe that the inducement of a second series of malarial rigors was a matter of mere routine procedure. We were, however, surprised to find that such was far

(1) Reprinted by kind permission of the Editor from the Journal of Tropical Medicine and Hygiens, December 1, 1925.

from being the case. Fourteen patients who were subjected to reinoculation, some even three times, showed no clinical signs of malaria.

To remove any possible doubt as to the technique of the inoculations, we would say that we are aware that if only gametocytic forms of parasite were introduced, no pyrexia could result. Proof that asexual forms were injected is to be found in the footnote to the accompanying table, for in every case except one we can point to other patients who were inoculated from the same syringeful of the blood of the donor, and who, later, developed true malaria, these patients being infected for the first time.

Having been confronted with such a definite immunity we had, perforce, to search for some factor peculiar to these immune cases which might be correlated with this resistance to subsequent infection, especially as we have found only one case to be resistant to a *first* infection.

In so far as naturally occurring malaria is terminated as speedily as possible by the exhibition of quinine, and whereas, in contrast, therapeutic malaria is allowed to continue to the limit of tolerance, we thought perhaps the number of rigors in the primary attack was responsible for the subsequent immunity, and that relapses might also be a factor.

Our figures show that such is not the case. Reference to our table will also prove that the inoculation methods of neither the primary infections nor the subsequent attempted infections had any bearing on the matter.

It should be added that all the primary pyrexias have been terminated in the usual way by means of quinine, which was administered until the blood was definitely negative to microscopic examination.

Further, our reinoculations have been performed at widely varying intervals of from six to twenty months.

In view of the theory advanced in support of the I.K. treatment of tuberculosis, viz., "that the more important protective substances of an immunized blood exist chiefly, though potentially, in the erythrocytes," we, for a time, thought that the relationship between the blood-groups to which the various donors belonged and those of the recipients might prove a fruitful field for research. It seemed possible that the hæmolysis consequent upon the mixing of different bloods might thereby liberate certain antibodies capable of having been produced by the first malarial attack.

The inoculation would necessarily account for an extreme dilution of such liberated antibodies, as is laid stress upon by those who support the I.K. theory.

68 AC	QUIRED	IMN	IUNI	TY	TO	N	MAL	ΑR	IAL	IN	oc	ULA	<b>AT</b> I	[0]	N.	[J	an.,
Same blood successful in cases number—	94 100, 101, 102	100, 101, 102	100, 101, 102	19	97, 98, 99 53	1	100, 101, 102 sbid.	53	97, 98, 99	22, 79	100, 101, 102	28, 77	28, 77	100, 101, 102	1 1	28	I.V. = Intravenous injection.
Route.	I.M. I.V.		N N	1	. Y.	.v. .v.	I.M.	ΙX	.v. .v.	I.V.	IM	I.M.	I.M.	 	 	I.M.	=Intrav
Blood from	STM —	97 :::	97 4	: :	88 :: 4		97	78 4	RS	78 : 4 RS : 1	4 76	102 4	102 4	:	85 · · 3	88	
Subsequent inoculation,	29/4/25 27/7/25	30/5/25	31/7/25		17/7/25	30/5/25	5/8/25	30/4/25	17/7/25	3/5/25	5/8/25	31/8/25	31/8/25	31/7/25	24/5/25	11/2/25	I.M.=Intramuscular injection.
Subse- quent change in C.S.F.	l %	Yes	Yes	1;	Yes			1	Yes		Yes	Yes	i	Xes	I es	Yes	. = Intran
Relapses.	Yes	Yes Yes	oN.	1;	χ χ Χ.			l	Yes		Yes	°Z		Yes	0 Z	oN.	
Number of rigors.	7	v 4	10	1	00				2		7	01		m	٥	61	mosquito
Route.	I.V. Mos. I.V.	11	ı	I.V.	I.V.			I	I.V.		I.V.	 		 	· -	I.M.	ission by
Blood from	15	Mosquito Mosquito	Mosquito	STM	Mosquito 20 20			: :	43 4		75 4	°°		° :	62 4	78 4	• This case was infected successfully before admission by mosquito.
First inoculation.	10/1/24 3/12/23 11/4/24	3/10/23	23/11/23	3/10/23	31/3/24				9/9/24		28/5/24	20/4/24		29/4/24	0/5/24	24/8/24	cted successfu
Age.	38	36 36	\$	29	36 32			31	30	:	35	87	•	£,	œ M	32	was infe
Blood group.	"	4 4	4	1	H <b>4</b>			N	4		H	4	•	4	4	"	his case
Case.	m∞	128	29	30	÷ ÷			.10	53		\$	62		63	71	22	-

Although having no practical experience of I.K. therapy and no real knowledge thereof, it seemed worth while to investigate and classify the blood-groups of the cases under review. We were again disappointed to find that no conclusion as to the significance of blood-grouping, in this connection, could be drawn, especially as all our donors except one happened to belong to Group 4.

Owing to the difficulty hitherto experienced in obtaining infected mosquitoes, we can, at present, point to but one case (No. 51) where a subsequent infection has been attempted by all three routes, inclusive of mosquito bite. Col. S. P. James, of the Ministry of Health, has recently arranged to assist us in this matter, so we hope it will be possible at a later date to report further on this point.

Whether the serum of an "immune" patient will abort or prevent the development of a rigor we are not in a position to say, nor have we the opportunity to ascertain, as the results obtained from the malarial treatment of general paralysis of the insane appear to be so beneficial, in our experience, as to prevent our terminating the pyrexia before we are compelled to by the condition of the patient.

In this connection it may be of interest to mention that where the necessary tests have been performed on the "immune" patients, we have found that only two have failed to show some change in the cerebro-spinal fluid (cf. also Lancet, October 31).

Our chief reason for publishing our findings is that the further research into such an acquired immunity, especially if carried out under more propitious conditions than those prevailing in a mental hospital, may yield results important to preventive medicine, and that it may be of use to others to know even such negative findings as it has been our lot to obtain.

Our best thanks are due to the medical superintendent, Dr. F. M. Rodgers, for permission to make use of our work for publication, to Prof. Mackie, of Edinburgh University, and to Dr. J. G. Thomson, of the London School of Tropical Medicine, for much encouragement and kindly advice.

The incubation period of naturally acquired benign tertian malaria is usually given as being from two to three weeks. Thus James (1920) states that the period is usually from 14 to 18 days, Stitt (1922) from 14 days, Acton, cited by Castellani and Chalmers

The Incubation Period of Benign Tertian Malaria (1). By G. DE M. RUDOLF, M.R.C.S., L.R.C.P., D.P.H., D.P.M., Assistant Medical Officer, Claybury Mental Hospital.

<sup>(1)</sup> Reprinted, with permission, from The Annals of Tropical Medicine and Parasitology, vol. xix, No. 2, July 16, 1925.

(1919), 6 to 21 days, and Castellani and Chalmers (1919) from 9 to 12 days. These authorities add that there are great variations in the length of the period outside the limits of the above figures. In addition, the cases of latent infection must also be remembered. In these cases several months, or even a year, may elapse since possible inoculation before the primary malarial attack develops. Often the onset is delayed until the patient undergoes some severe strain of either a mental or physical nature (James, 1920). The incubation-period of the naturally-acquired infection is thus seen to be extremely variable.

## ARTIFICIALLY INOCULATED MALARIA.

(i) Mosquito inoculations.—Sir Ronald Ross (1911) gives details of cases inoculated artificially by means of infected mosquitoes. The length of the incubation period as measured by the first rise in temperature is recorded in nine instances, and was found to vary from 10 to 14 to 25 days. In seven of these cases Plasmodium vivax was first demonstrated in from 16 to 30 days after infection.

In five general paralytics inoculated from mosquitoes by Lieut.-Col. S. P. James the incubation-period varied from 11 to 16 days as regards the first definite malarial rise of temperature. In four of these cases the parasites were first found on the 17th and 18th days—three on the 17th and one on the 18th. Davidson (1925) found in a series of 23 cases that the period varied from 7 to 20 days.

In, therefore, a total of 37 cases the incubation period, as measured by the first rise of temperature, varied from 7 to 25 days, and in 34 cases from 7 to 30 days as regards the first appearance of parasites, Davidson measuring the period by both methods.

(ii) Subcutaneous inoculation,—Most authorities give approximately corresponding lengths of time for the duration of the incubation period when inoculation is practised subcutaneously. Thus Gerstmann (1924) states the period varies from 4 to 28 days, Scripture (1923) from 6 to 31 days. Donner (1925) from 5 to 21 days, Yorke and Macfie (1924) usually from 8 to 15 days, but with considerable variations, Worster-Drought and Beccle (1923) from 9 to 24 days, and Nonne (1922) from 10 to 24 days. The table given by Pijper and Russell (1924) shows an incubation period of from 9 to 18 days, and that of McAlister (1924) from 9 to 32 days. series of 43 benign tertian malaria inoculations given by Grant and Silverston (1924) the first rise of temperature occurred from I to 18 days after inoculation, whereas parasites were first found from 6 to 22 days after. Korteweg (1924), in a series of 52 cases, found that parasites were first demonstrated in thick films in from 5 to 21 days after inoculation.(2)

Unfortunately, not all of these authors state whether they define the termination of the incubation period by the date upon which parasites were first found, or by the date upon which the first increase of temperature occurred. It is, however, clear that the incubation period may be of many days' duration.

The incubation period of a disease is that period which elapses between the admission to the body of the infecting organism and the first onset of symptoms. The latter may be subjective or objective (Gould, 1915). As the first appearance of symptoms may be objective in nature, the first day on which parasites are found in the peripheral blood-stream might be taken as the termination of the incubation period. The disadvantage of this method, however, lies in the fact that there are so many factors to be taken into consideration when comparing the lengths of the incubation period in different patients. At the commencement of an attack of malaria the parasites are usually comparatively few in number. In this case the day upon which the plasmodia are first found will depend upon: (a) whether thick or thin blood-films are used. (b) whether the whole or only a part of the film is examined and. if a part, which part (see below); and (c) the length of time each film is studied. In certain instances a fourth factor must be added: (d) the previous experience of the observer. If it were possible to adopt general standard conditions, the method of measuring the incubation period by the first appearance of the parasites would be of value.

With regard to the subjective symptoms, it is clear that the length of the incubation period cannot be determined by observing the occurrence of the first rigor, for many general paralytics inoculated with malaria do not shiver at all during their febrile treatment. The same applies to a subjective sensation of coldness, to sweating and to general enlargement of the spleen. The temperature, however, is raised during the initial malarial paroxysms, although, of course, parasites may be present during a relapse without fever occurring. But when the length of the incubation period is under discussion malarial relapses do not enter into the subject. It should, however, be added that occasionally patients who have suffered from malaria previously may not develop febrile paroxysms but may show parasites for a few days. One such instance has occurred at Claybury Mental Hospital. In these cases, which are very rare, the method of recording the incubation period by the first rise in temperature is not suitable. Now, non-inoculated general paralytics are subject, from time to time, to variations in temperature (Rudolf, 1925), and therefore an isolated elevation, or a succession of elevations of temperature not immediately followed

by typical malarial paroxysms or other definite signs of active malarial infection, must not be taken as the termination of the incubation period. As described by Korteweg (1924) and Rudolf (1924), some patients have an attack of malaria showing an irregular and moderate temperature sometimes persisting for days, others by showing a series of elevations becoming progressively higher, and still others by a sudden very high elevation following a low, perhaps subnormal, temperature. Clearly, an initial rise of temperature to perhaps 100° F. in one case cannot be taken as the equivalent of a primary elevation to 105° F, in another case. To obviate this difficulty it is suggested that two rises of temperature be recorded to show the commencement of the malarial fever—(a) the first elevation to 101° F. or over, and (b) the first to 103° F. or over. By adopting this method it is possible to tell at a glance whether a patient commenced his paroxysms suddenly or gradually. It will be observed that in this method increases of temperature under 101° F. are not included. Now it is, of course, possible for a malarial paroxysm to show a rise of temperature of less than 101° F., but such a small rise of temperature would be extremely difficult to differentiate from an elevation accompanying the general paralysis. Rises of temperature above 101° F. are less common in untreated general paralytics.

In this connection the method adopted for recording the patient's temperature is important. From the time of inoculation the temperature should be recorded at least every four hours. Whenever it rises above normal it should be taken at least every hour, or even every ten minutes. The temperature varies so considerably within a short time that unless it is recorded very frequently the height of the fever might be missed.

The following table shows the length of the incubation period as measured by the onset of the fever in the first 50 cases of general paralysis inoculated with *Plasmodium vivax* at Claybury Mental Hospital:

TABLE I.

First rise of temperat	ure		101° to 10:	a∙9° F.	103° F. 01	over.
occurring.			Number of cases.	%	Number of cases,	%
Up to 10 days		•	23	46	19	38
From 11 to 20 days.	•	•	22	44	23	46
From 21 to 30 days.			5	10	8	16

The above table shows that the greater number of cases show an incubation period of less than 21 days.

TABLE II.—Occurrence of First Rise of Temperature to 101° F.

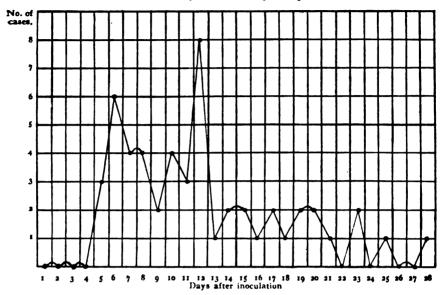
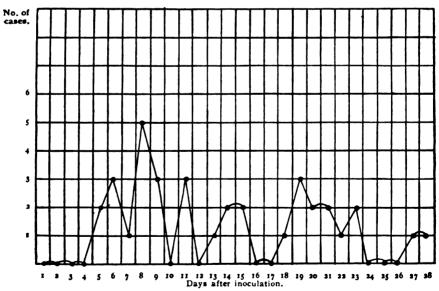


TABLE III.—Occurrence of Fist Rise of Temperature to 103° F.



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TABLE IV.—First Appearance of Parasites in Thick Films (adapted from Korteweg).

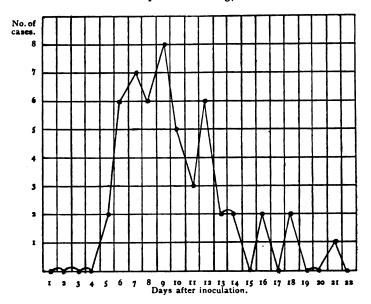
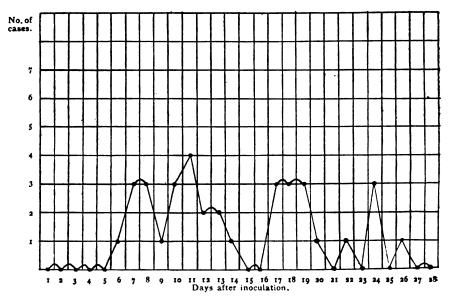


TABLE V.—First Appearance of Parasites in Thin Films.



With regard to the first appearance of parasites, Tables IV and V show the number of days after inoculation when parasites were first found. Table IV is adapted from Korteweg (1924). This observer used the thick-film method. Table V shows the first days on which parasites were found in cases treated at Claybury Mental Hospital. Korteweg does not state that he searched the thick films for a definite length of time, and similarly the thin films of the Claybury series were not searched during a standard time.

On comparing Tables IV and V with Tables II and III it will be observed that the curves of the first rise of temperature to 101° F. and of the first time that parasites were found in thick films are very similar. This is the more remarkable when it is remembered that the observations were made upon two series of cases treated with different strains of P. vivax. On comparing Table III with Table V a similarity between the curves will be again seen, both the curve of the first rise of temperature to 103° F. and the curve of the first time that parasites were found in thin films being divided into three groups. The groups do not, however, correspond with regard to the periods in which they occur. The observations in Tables III and V were made on the same patients.

If observations of the first time that parasites were found in thin films, searched for varying periods, and of the first rises of temperature to 101° F. and to 103° F., in the same patients, are grouped, it will be seen that the means lie close to a straight line as shown in Tables VI and VII. These tables show that, in the same patients, there is a marked tendency for the parasites to be found for the first time when the first rise of temperature occurs. On working out the coefficients for the same variables a high correlation is observed. The coefficient for the first time that parasites were found and the first rise of temperature to 101° F. is +.9032, and that for the same first variable but the rise of temperature to 103° F. is +.9091. There is, therefore, little difference between the coefficients when either the first rise to 101° F. or that to 103° F. is used.

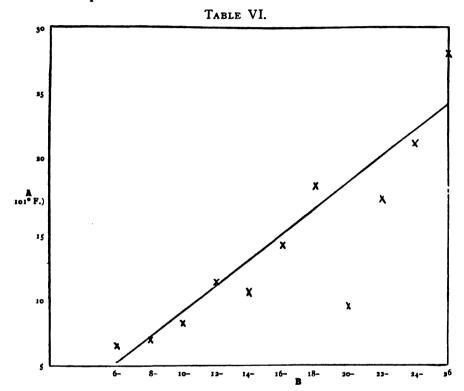
The above confirms the observation that parasites are first found when the first rise of temperature occurs.

(iii) Intravenous inoculation.—The duration of the incubation period when this method is chosen would appear to be shorter than when the injection is made subcutaneously. Sir Ronald Ross (1911) gives details of six intravenous inoculations of benign tertian malaria. In these cases fever first appeared in from 3 to 12 days and parasites were first found in from 4 to 12 days after inoculation. Templeton (1924) states that in 20 cases of dementia præcox inoculated intravenously with 2 to 3 c.c. of malarial blood the

# 76 INCUBATION PERIOD OF BENIGN TERTIAN MALARIA, [Jan.,

temperature usually rose the day after inoculation. Macbride and Templeton (1924) found that pyrexia usually developed on the second or third day in a series of 18 general paralytics. In both

TABLES VI and VII.—Graphs of the Lengths of the Incubation Periods as Measured by the First Finding of Parasites and by the First Temperature-rises.



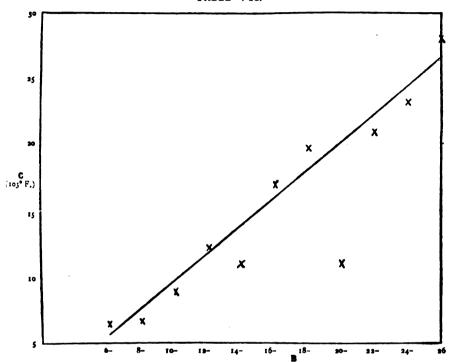
series of cases the temperature was, as a rule, irregular for a few days. Davidson (1925), in a series of 16 general paralytics, found that the incubation period varied from 4 to 19 days. The period was measured by the occurrence of fever and the first appearance of parasites.

Therefore, in 60 intravenous inoculations the incubation period was found to vary from 1 to 19 days.

(iv) Intramuscular inoculation.—Dr. D. R. Alexander has kindly supplied me with details of cases of general paralysis inoculated intramuscularly at Bexley Mental Hospital. Table VIII shows the length of the incubation period as measured by the first rises

of temperature. The strain of P. vivax utilized was the same as that used at Claybury Mental Hospital.





- A. Number of days to the first rise of temperature to 101° F. expressed as averages of each group of B.
- B. Number of days to the first finding of parasites. Cases arranged in two-day periods; e.g., patients in whom parasites were first found on the 6th and 7th days are grouped together in Group 6-.
- C. Number of days to the first rise of temperature to 103° F. expressed as averages of each group of B.
- X = Average number of days before the first rise of temperature to 101° F. or 103° F. The diagonal lines are drawn to agree with the majority of the crosses.

TABLE VIII.

First rise of temperature	101° to 10	9° F.	103° F. 01	over.
occurring.	 Number of cases.	%	Number of eases.	%
Up to 10 days	9	60∙0	8	53.3
From 11 to 20 days	6	40.0	6	40.0
From 21 to 30 days	0	0.0	I	6.7

On comparing Table VIII with Table I it will be observed that when the same strain of parasite is used there is a tendency for the incubation period to be slightly shorter with intramuscular inoculation than with subcutaneous. On account of the relatively small number of cases, namely 15, in Table VIII, it is probable that the differences between the lengths of the incubation period with the two methods of inoculation are actually smaller than appears from the tables. This is in accordance with the findings of Davidson (1925). This observer noted that in a series of 13 cases the length of the incubation period, as measured by the first fever and the first appearance of parasites, varied from 10 to 23 days, this approximating to the incubation period when the subcutaneous route is adopted. In the two series of a total of 28 cases the incubation period varied from 6 to 23 days as measured by the first occurrence of fever.

#### Dosage and Incubation Period.

The usual dose of malaria-infected blood inoculated into general paralytics is from I to 5 c.c., although Pijper and Russell (1924) have used 10 c.c. There can, therefore, be great variations in the quantity injected. If one patient were inoculated with 2 c.c. of blood and a second with 4 c.c., it might be expected that the incubation period of the former patient would be twice as long as that of the latter. But as the malarial parasite is the cause of the clinical signs of malaria, it is clear that the volume of blood in itself can bear no relation to the incubation period, but that the number of parasites present in the blood is the important factor. In order to determine whether there is any correlation between the number of parasites injected and the length of the incubation period, it is necessary to know the actual, or the comparative, number of parasites in unit volume of blood. comparative number is chosen, then the blood for inoculation must be drawn at one time from one patient, for the numbers of parasites vary in different cases, and also in the same case at different times. The blood should then be divided and inoculated into the patients whose incubation periods are to be compared. The blood must be well shaken before each inoculation, or the red cells containing the parasites will sink to the bottom, and the patients will not receive the correct number of red cells according to the volume of blood injected. For the same reason no more than the exact quantity of blood required for each injection must be sucked into the syringe. If more than required is in the syringe, the first patient to be inoculated may receive too few or too many erythrocytes per cubic centimetre according to whether the needle of the syringe is held pointing upwards or downwards.

The above comparative method has been used in the study of a series of cases inoculated subcutaneously with benign tertian malaria at Claybury Mental Hospital. The following method was that adopted for determining the first appearance of the parasites. Thin films were examined daily, commencing seven days after

IABLE 1.
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	1		1		in days.	
Series No.	Patient's No.	Sex.	Dose in c.c.	Parasites first found,	First temperature to 101° F.	First temperature to 103° F.
1	1 1	М.	2	17	17	17
-	AI [	M.	2	13	9	9
2	S 2	M.	2	14	11	13
-	2A	M.	2	16	19	19
3	3	M.	1.5	7	7	10
3	] 3A	F.	1.2	5	7	8
4	J 4	M.	3	19	21	22
•	17 44	F.	3	19	18	18
5	5	M.	5	12	8	9
3	\ 5A	F.	3 3 5 5 5	26	26	29
6	j 6	M.	5	6	5	6
U	\ 6A	F.	4.5	8	6	6
7	57	M.	3	18	20	20
,	1 7A	F.	3 5	11	6	8
8	j 8	M.	2 · 1	9	8	9
	1 8A	M.	4	6	7 6	8
	7 9	M.	2	11	6	9 8 8 6
9	9A	M.	3	11	6 -	6
y	1 9B	M.	4	7	6	11
	\ 9c	M.	5 2	7	8	10
	10	M.	2	21	17	19
10	ACE }	F.	4 8	16	15	15
	IOB	М.	8	13	12	14

inoculation, except in certain cases in whom the rises of temperature started before that date. After the first appearance of parasites in the films had been found in this manner, more accurate observations were made. The films taken on the day previous to the first appearance of the parasites were each examined during a standard time of thirty minutes. Particular attention was paid to the edges and to the "tags" of blood at the end of the film, as parasites are often found in greater numbers in these situations than in the remainder of the film. Table IX shows the results obtained. The patients bracketed together were inoculated from the same patient. The total quantity of blood required was withdrawn, divided into the necessary quantities, and injected into the general paralytics to be

treated. The relationship between the quantity of blood, and therefore the comparative number of parasites inoculated, and the length of the incubation period can therefore be studied in each series of cases bracketed together. The table shows the duration of the incubation period as measured by the date on which the first rise of temperature to 101° and to 103° F. occurred.

Table IX may be divided into two groups: The first consists of the series Nos. I to 5, the patients in each series being given the same number of parasites; the second consists of the series Nos. 6 to 10, the patients in each series being given different numbers of parasites. Series Nos. I to 4 show that when there is the same dosage of parasites the length of the incubation period is somewhat similar in each series. In series Nos. 1, 2 and 4, it is more nearly similar when it is measured by the time that parasites were first found than by the first rises of temperature. In series No. 5 there is a marked difference between the length of the period in the two patients. Patient 5A had been inoculated previously with malaria, but had not "taken." The resistance of this patient was presumably high. After the second inoculation, however, all the parasites could not have been destroyed, but, if a large number were, the same effect would be produced as if a small number had been injected.

The later series of the table, Nos. 6 to 10, show the effect of inoculating different numbers of parasites. It will be observed that, in each series, the cases that received the smaller dose gave the longer incubation period as measured by the first appearance of parasites. This was also found to hold when the length of the incubation period is measured by the first rise of temperature except in one series, No. 9. In this series the patients that received the greatest number of parasites showed the longest incubation periods as regards the first rise of temperature, but the shortest as regards the first appearance of parasites. It will also be observed that the incubation periods measured by the first time that parasites were found agree more nearly with the dosage, in an inverse relationship, than do the same periods when measured by the first rise of temperature.

# SUMMARY.

- (i) The incubation period of the naturally acquired benign tertian malaria is given by most authorities as being from 6 to 21 days, with, however, wide variations.
- (ii) In 34 cases (chiefly from the literature) inoculated by means of anopheline mosquitoes, the incubation period varied from 7 to

30 days as measured by the first date on which parasites were found, and in 37 cases from 7 to 25 days as measured by the first rise of temperature.

- (iii) Subcutaneous inoculation of malarial blood gives, according to a number of writers, an incubation period of from I to 32 days (3). A series of 50 general paralytics inoculated subcutaneously with *Plasmodium vivax* showed that 90% gave a rise of temperature of from 101° to 102.9° F. in less than 21 days after inoculation and 46% in less than 10 days. The first rise of temperature over 103° F. occurred within 21 days in 84% and within 10 days in 38%.
- (iv) Following subcutaneous inoculation there is a well-marked correlation between the first rises of temperature to 101° F. and to 103° F. and the first finding of parasites in thin films. The frequency-curves of the first finding of parasites in thick films and of the first rise of temperature to 101° F. are very similar, although the observations were made upon two different series of cases inoculated with two different strains of parasite. Curves of the first finding of parasites in thin films and the first rise of temperature to 103° F., in the same series of cases, are also somewhat similar.
- (v) Intravenous inoculation of malarial blood gave an incubation period of from 1 to 19 days in a series of 60 cases collected from the literature.
- (vi) In a series of 28 cases inoculated intramuscularly at Bexley and Winwick Mental Hospitals the incubation period varied from 6 to 23 days.
- (vii) In 10 series of cases injected subcutaneously with malarial blood it was found (a) that when similar numbers of parasites were injected the incubation periods were of somewhat similar lengths, and (b) that when different numbers of parasites were injected the incubation periods showed a marked tendency to be shortest when the dosage of parasites was the greatest. In one series of four cases this relationship did not hold as regards the first rises of temperature, but only as regards the first dates on which parasites were found. In most series the length of the incubation period as measured by the first time that parasites were found, under standard conditions, corresponded more nearly to the dosage than did the length of the period as measured by the first rises of temperature.

I have again to thank Lieut.-Col. S. P. James for his kind assistance. My thanks are due to Drs. G. F. Barham and G. Clarke, Medical Superintendents of Claybury and Bexley Mental Hospitals, for permission to publish records from the two institutions, and to Dr. M. Greenwood for his kindly help.

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I am indebted to Dr. D. Firth, of King's College Hospital, and to Dr. F. Kiddle, of Severalls Mental Hospital, for details of cases.

#### REFERENCES.

Acton.—Cited by Castellani and Chalmers (1919).

Castellani, A., and Chalmers (1919).—Manual of Tropical Medicine.

Davidson, T. W. (1925).—"Treatment of General Paralysis by Malaria," Brit. Med. Fourn., 1925, i, p. 452.

Donner, S. (1925).—"Malarial Treatment of Progressive Paralysis," Finsk. Lakares. Handl., January, 1925, p. 8.

Gerstmann, J. (1924).—" The Malarial Treatment of Progressive Paralysis," Ars Medici, ii, pp. 345-346.

Gould, G. M. (1915).—A Pocket Medical Dictionary.

Grant, A. R., and Silverston, J. D. (1924).—" Malarial Therapy in General Paralysis," *Journ. Ment. Sci.*, lxx, pp. 81-89.

James, S. P. (1920).—Malaria at Home and Abroad.

Korteweg, P. C. (1924).—" The Initial Fever in Tertian Malaria," Ned. Tij. v. Geneesk., 1924, No. 15.

Macbride, H. J., and Templeton, W. L. (1924).—" The Treatment of General Paralysis of the Insane by Malaria," *Proc. Roy. Soc. Med.*, xvii, No. 8.

McAlister, W. M. (1924).—" The Rôle of Infection in the Treatment of General Paralysis," Fourn. Ment. Sci., 1xx, pp. 76-81.

Nonne, M. (1922).—"Treatment of General Paralysis and its Relation to Malaria," Revista Med. de Chile, 1, p. 481.

Pijper, A., and Russell, B. D. (1924).—" Incubational Changes in the Red Cell Count in Inoculated Malaria," *Brit. Med. Fourn.*, 1924, ii, p. 620.

Plehn, A. (1925).—"Remarks on Malaria in General Paralysis Patients," Arch. f. Schiffs. u. Tropenhyg., xxix, Pt. 2.

Ross, R. (1911).—The Prevention of Malaria.

Rudolf, G. de M. (1924).—" The Temperature-Chart in Artificially Inoculated Malaria," *Journ. of Trop. Med. and Hyg.*, xxvii, pp. 259-263.

Rudolf, G. de M. (1925).—" The Malarial Treatment of General Paralysis," *Journ. Ment. Sci.*, lxxi, pp. 30-41.

Scripture (1923).—Ibid., lxix, p. 79.

Stitt, E. R. (1922).—Diagnosis and Treatment of Tropical Diseases. Templeton, W. L. (1924).—"The Effect of Malarial Fever upon Dementia Præcox Subjects," Fourn. Ment. Sci., lxx, pp. 92-95.

Worster-Drought, C., and Beccle, H. (1923).—Brit. Med. Journ., 1923, ii, p. 1256.

Yorke, W., and Macfie, J. W. (1924).—" Certain Observations on Malaria made during Treatment of General Paralysis," *Lancet*, 1924, i, p. 1017.

(\*) Wagner-Jauregg has reported an incubation period of 36 days (Journ. Nerv. and Ment. Dis., lv, p. 369).—(\*) Wagner-Jauregg has reported an incubation period of 36 days.

The Fæcal Acidity in the Insane Epileptic. By Geoffrey Cobb, M.R.C.S., L.R.C.P., D.P.M., Resident Physician, Brooke House, Clapton.

The following is a brief synopsis of some notes relating to the acidity of the fæces in epilepsy. These results were obtained and compiled as preliminary data, anticipatory to the carrying out of further investigations with regard to epilepsy. The fæcal acidity of 50 female epileptics, who were chosen at random from those undergoing treatment in hospital, was determined. These estimations were not detailed, but were of sufficient accuracy for comparative purposes. In each case the term "acidity" denotes that quantity of normal sodium hydroxide solution, measured in cubic centimetres, required to neutralize the total quantity of acids extracted from 100 grm. of the given specimen of fæces. Several analyses were carried out in each case.

The cases thus examined showed the lowest average mean acidity = 5.22, and the highest average mean acidity = 17.64.

The specimens of fæces were obtained at different intervals, both during the period when the patients were experiencing many fits and also during their comparatively quiescent period. The fitincidence in all cases was noted for each month. The fæcal acidity served no criterion as to the number of fits which the patients experienced. Many patients, showing a high acidity, did not have an increased number of fits over those whose fæcal acidity was low, and vice versa. As was previously mentioned, all the cases were chosen from that group which for purposes of hospital administration were classified as "epileptic." Amongst these were included congenital mental defectives, senile cases, chronic alcoholics, and many with organic cerebral lesions. It was accordingly decided to conduct a further examination into those cases of the so-called idiopathic epilepsy who fulfilled the following conditions: (1) Non-syphilitic, (2) non-arteriopathic, (3) under 40 years of age, (4) without any accompanying bodily disorder, (5) showing

normal blood-pressure (approx.), (6) not congenitally mentally defectives.

Fifteen patients who complied with the above were chosen. They underwent no medicinal or dietetic treatment for the period of one month prior to obtaining from them the first specimen of

Estimations of the acidity of the fæces and urine were determined at frequent intervals over a period of one month. The number of fits experienced by each patient during this time was recorded. The results are shown in Table A.

		TABI	E	: A.			ļ			Тав	LI	ε В.	
Name.		Fæcal acidity.		Urine acidity.	-	Number of its during month.		Name.		Fæcal acidity.		Urine acidity.	Number of fits during month.
F. G-		6.35		1 · 4		20		F. G	•	5:33		1.9	19
M. B-		6.59		2.7		2	!	М. В		11.34		0.2	7
R. T—		5 · 79		1.9		8	1	R. T—		2.50		2 · 5	9
V. H		6 · 17		3.4		43		V. H—		6 · 27		6 · 5	6 <b>r</b>
M. A		9.95		I . O		15		M. A		5 · 39		3.6	18
S. M—		5 · 17		1 · 8		2		S. M—		4.58		1.9	3
E. H—		5.41		2.0		10		E. H—		3.75		1.9	8
M. C-		8 · 10		0.9		5	1	M. C		7.72		1.7	7
L. B—	•	4 · 17		4.4		16	ļ	L. B		5 · 39		0.5	17
K. B—		6.95		2 · 8		2 [		К. В—		4.42		4 · 5	4
T. R-		11.77		2.5		13	1	T. R		3 · 20		2 · 2	20
S. C		9.15		2.0		5	1	S. C—		6.56		0.2	16
E. B—		6 · 89		4.0		4	:	E. B		$8 \cdot 75$		_	14
S. S		6.59		6.9		5		S. S		7.05		1 · 5	5
F. W-	•	6.81		1.3	•	59		F. W-		5 · 22		4.0	71

These same 15 patients were then subjected to an increased carbohydrate diet.

Doses of pure potato starch were administered three times a day. This administration of starch was in addition to the carbohydrate contained in a diet of potatoes, bread, etc.

After being treated for one month and whilst still continuing this diet, samples of faces and urine were again examined. The number of fits occurring during one month of this treatment was recorded.

The results are shown in Table B.

#### REMARKS.

The fæces and urine in all the cases examined showed an acid reaction. No alkaline or neutral reaction was obtained. Many cases whose fit-incidence was high did not show a corresponding high acidity of fæces, and vice versa. There was considerable variation in the degree of acidity shown in individual cases. Sometimes the patient had more fits when the fæcal acidity showed a low reaction, sometimes the reverse condition obtained.

The increased carbohydrate diet produced no appreciable alteration in the reaction of the fæces or urine. Similarly there was no general increase or diminution in the number of fits which occurred when the patients were on this diet, as compared to the number occurring when patients were taking an ordinary diet.

The general mental state of patients when taking extra carbohydrate remained much about the same as previously. There occurred nothing in the nature of epileptic equivalents or replacements.

If acidosis be regarded as an ætiological factor in epilepsy, the ingestion of extra carbohydrate did not appear to aggravate the condition.

The degree of fæcal acidity was not systematically compared with that of the non-epileptic subject. In two normal cases, however, the examination of fæces showed varied reactions in the same proportion as the above, so it would be inferred that the results would be comparable. Further, the reactions obtained in the first series of analyses showed a similar variation in reaction to those shown by the true epileptics.

## Clinical Notes and Cases.

Notes on Treatment by Hypnotic and Hypnoidal Methods of Extern Cases. (1) By JOHN J. FITZGERALD, M.D., Assistant Physician, Cork Mental Hospital.

The question of early treatment of incipient mental illness—a problem which is being solved to some extent in England—has not, so far as I am aware, been dealt with yet in the Free State. The establishment of out-patient clinics in mental hospitals would be a desirable way to institute such treatment here.

It has been stated that very few patients would come for treatment to the out-patient clinic of a mental hospital as they would be branded as being insane by their attendance at such a place. I admit there is something in this objection, and no doubt the better arrangement would be to have a doctor from the mental hospital attending on certain days at a general hospital, where he would

<sup>(1)</sup> A paper read at the Summer Meeting of the Irish Division held at Cork, July 14, 1925.

have the assistance of specialists in various branches of medicine and surgery.

I shall now describe to you an unofficial extern department which I have conducted for the past twelve years. In the year 1913 I moved from my quarters in the asylum to Mile House, Blarney Road, on the asylum estate, which had been occupied as a private residence for nearly forty years before its purchase by the asylum authorities. I may explain here that the mental hospital grounds at Cork lie between two public roads. The entrance to the asylum is from the Lee Road, the entrance to Mile House is from the Blarney Road: so that the objection that some patients would have to attend at a mental hospital for treatment does not arise. About this time I read the Report of the Status of British Psychiatry Committee issued by the Medico-Psychological Association, which advocated the treatment of early or incipient cases of mental derangement at out-patient departments of general or mental hospitals. It occurred to me that I might possibly do some good for cases of incipient insanity by commencing an unofficial extern department of the Cork Mental Hospital at Mile House. With this idea I spoke to some leading physicians and surgeons at a local meeting of the British Medical Association, and told them that if they had amongst their hospital patients any who were threatened with mental breakdown, I should be glad to treat those patients free of charge at Mile House.

Since that time, now twelve years ago, I have been treating about 16 such patients a year, and am able to say that the results have been most encouraging. The only failures were certifiable cases. Of course the work has been in private, but an official extern would have dealt with a much greater number of cases. I hope that out-patient departments will soon be created at all our mental hospitals; we shall then be doing something towards the prevention of insanity. Out-patient departments need not commence on a pretentious scale, and may in consequence be immediately established. One physician and one social worker for each out-patient clinic will be enough at the beginning; the latter could be recruited from our nursing staffs. The social worker would help the medical officer in taking notes of cases and in visiting patients' homes to give advice and assistance, and to investigate the conditions of a patient's home life and surroundings.

Co-operation between medical officers of mental hospitals, schools, dispensaries and teachers would gradually follow. Early symptoms of abnormality in children could be early detected and dealt with immediately, and many prevented from becoming patients of our Free State mental hospitals in ten or twenty years' time.

Most of the patients who come to Mile House, although unable to pay a fee, are able to buy medicines and extra dietary. As regards the very poor who are unable to buy either food or medicines, a gratuitous supply of medicines, etc., will be necessary; this matter could be adjusted after a while. Some expenditure in preventative treatment would be better than having to erect auxiliary mental hospitals.

Patients applying for treatment at Mile House are thoroughly examined physically, urine tested, and the presence of possible focal lesions of tonsils, teeth or naso-pharynx looked for. If any such lesions are found the patients are sent to the general hospital for appropriate treatment. The general physical examination of the patient being finished they are invited to recline on a couch in a room with the blinds drawn, instructed to assume a position of comfort with relaxation of their muscles, then told to close their eyes, breathe regularly and compose themselves as if going to sleep A softly ticking clock or watch near them adds to the general air of rest and monotony; patients are not asked to fix their attention on the ticking of the watch or clock. After they have lain quietly for some ten minutes on the couch in silence, they are asked if any troublesome or worrying thoughts arise in their minds to tell the doctor about them, and that the mere telling and discussion of these distressing thoughts will give mental ease.

At the first interview patients are usually constrained and not very communicative, but on subsequent interviews they talk freely about their sorrows and worries, and always express themselves, when leaving, as feeling relieved and happier in their minds.

Patients have told me again and again that they found it much eaiser to recollect incidents of their past lives, and to explain their mental troubles, when lying on a couch in a state of quietude and rest in a darkened room, than when they were sitting bolt upright opposite doctors in an out-patient department of a general hospital or in doctors' consulting-rooms.

I have adopted this particular method of examining and treating the mental states from Boris Sidis. He calls it the hypnoidal system. It is of use in all cases, but particularly in cases of psycho-neuroses. I frequently avail myself of light hypnosis when treating some patients. The lightest degree of hypnosis is all that is necessary for suggestive treatment, and if a patient is not improving after three sittings I discontinue it, and rely altogether on the hypnoidal system just described.

Nearly all patients are given small doses of sodium bromide at commencement of treatment, and each patient is fully instructed as regards dietary, exercise, rest, regulation of bowels, etc. Tonics, cod-liver oil, hypophosphites, maltine and other drugs are prescribed if necessary.

As a rule I do not treat by suggestion at the first interview, but always give an optimistic prognosis to patient and friends. One difficulty cropped up soon after the extern was commenced. I had, when treating females, to have a female relative or friend of the patient's in the room with me. I need not say that no woman or girl patient would talk freely to a doctor under these circumstances. However, this hitch was overcome easily, as my wife, Dr. Lucia FitzGerald, who is an assistant medical officer here, has taken over all female patients, and obtained equally good results with her cases.

I trust that the title of this paper, and the fact that I have described at some length the particular form of psychotherapy that we have found useful, will not obscure my real motive, which is to make a plea for the immediate establishment of out-patient clinics attached to the mental hospitals in the Free State.

The following are some notes on four cases of patients treated at Mile House:

CASE I.—Acute melancholia.—Male, æt. 48, widower, no children. Family history: Several near relatives insane. Patient was powerfully built, a cooper; had been a heavyweight boxer in his early years. He had a few months before begun to sleep badly, and ordinarily a cheerful man, fond of singing at his work, he was noticed by his fellow-workmen to have become silent and morose. Was the sole support of a large family of boys and girls, children of a deceased brother. He had been under treatment as an out-patient for about six weeks at a local general hospital, and was supposed to be suffering from "nerves." He was not improving, and his relatives were about to get him admitted into the asylum. When he was brought to see me he was free from delusions, but complained of want of sleep, loss of appetite; said he felt miserable and unhappy, and had a vague apprehension of some impending trouble. I treated him by hypnoidal methods. At his fifth visit, while in a hypnoidal state, he told me that he had many years before suffered keen mental distress and remorse over an incident in his life which, however, he had long ceased to worry or think about. He had one day, when leaving his home for work, been asked by his wife to bring a doctor to see her, as she felt very ill. He laughed her fears away, as she looked the picture of health, although she was an exceptionally stout woman. In a few hours he was summoned home as his wife had died suddenly. I assured him that he was in no way to blame in the matter; that he could not have foreseen it, and that the record of his whole life showed him to be a decent and kindhearted man. He went away comforted, but still depressed. On the morning following, a brother who slept in the same bedroom was amazed to find that the patient was quite himself again. He visited me a few days afterwards, expressed himself as delighted with his recovery and immediately returned to work, and has remained perfectly well for the last ten years. He had been attending here about two and a half weeks when this happy result came about. I gave him bromides in small doses twice daily, a stomachic tonic, and allowed him two bottles of stout a day. I told him to rise late, go to bed early, keep his bowels freely open. A brother, as I have mentioned, slept in the same bedroom, and he was never left alone day or night while depressed.

Case 2.—Acute melancholia.—Boy, æt. 10\frac{1}{2}. Patient's brothers and sisters were healthy and normal. His father, described as a ne'er-do-well, had deserted the mother when the patient was a baby. Patient was of normal intelligence and conduct, fond of play and healthy. Four weeks previously he had become acutely depressed, used to start up at night from his sleep and scream loudly, and his

mother had great difficulty in soothing him. At the first interview said he could not say what was making him so miserable unless "it is that my soul is lost." Said he could neither play nor study. He had been attending a local dispensary and had already been put on extra dietary. At his first visit it was very difficult to get him to relax his muscles, but on being told to pretend that he was playing at being dead he succeeded in doing so at last. Hypnosis was induced by means of fixed gazing and simple passes; he was easily hypnotized, and suggestions were made with one hand on his forehead that his fears would vanish and that he would become quite happy and well. He was feeling happier when aroused and returned in two days' time, when he was again hypnotized. On this occasion he passed into a natural sleep for about half an hour; when roused he sat up and said with delight and surprise on his face, "Oh, every bit of it is gone, doctor." His mother was present on both occasions when he was hypnotized by my wife. His mother was told to keep him from school for a year, and not to allow him to study. He has remained well and healthy for the last two years.

CASE 3 .- Acute climacteric melancholia .- Married woman, æt. 50. A brother and several cousins were insane; a son is a patient in Cork Mental Hospital, suffering from dementia præcox; three other children healthy. She suffered from insomnia for months and was very hypochondriacal, and lately very depressed. anorexia, was extremely constipated, and had irregular and scanty menstruation for some months. Her youngest child was over 14 years old. She was full of vague forebodings: said she was suffering from a disease of the stomach that would kill her. She reiterated again and again, "My case is hopeless; you can do nothing for me." She also said that she heard terrifying noises by night in her home. Laxatives were prescribed; she was told to take light, easily digested food, and ordered a mixture containing small doses of bromide of sodium. She was put into a state of light hypnosis before leaving, and the usual suggestions were made. She remained in bed for a week at home. She had never expressed a desire to commit suicide, but nevertheless her husband was instructed not to leave her by herself at any time. At the end of a week her husband brought her to the extern again: he said that she was very depressed on the previous night, and he wanted to see about getting her into the mental hospital. She was hypnotized easily on this occasion, passing readily into a cataleptic state, and at suggestions imagined she was back at home and described what she saw there. Suggestions of a hopeful and optimistic nature were made, and when awakened she said she felt much better. She came again in a week's time; she seemed very cheerful and rational, but said she had a momentary feeling of apprehension at times. Hypnosis was again induced, and repeated suggestions of renewed health and happiness given. She has remained perfectly well for the last five years, doing her housework and coming through a good deal of domestic trouble without any tendency to a mental breakdown.

CASE 4.—Psychasthenia.—Unmarried woman, æt. 28. Family history bad: much insanity and various neuroses amongst progenitors and near relatives. Used to assist her mother to run a small shop. At the age of 16 she had had what was described as "a nervous breakdown." At that time her mother said patient was very frightened and depressed, feared to be left alone, slept badly, lost weight, and had outbursts of violent temper on the slightest provocation. She also was much troubled with religious scruples. Under treatment by a city doctor her acute symptoms subsided, and she was pronounced to be as well as ever she could hope to be. For twelve years afterwards she had never been able to go for a walk alone, although she sometimes assisted in the shop and generally ate and slept well. A few weeks before she was sent to me she had had an exacerbation of all her old symptoms, and her old religious scruples were redoubled and intensified. If left alone in her room she would become terrified, and would faint if she went into a railway carriage, even if accompanied by several relatives. The physician attending her had fully made up his mind that she should be sent to the asylum, but having heard of our extern department sent her on to it. She came, accompanied by her mother and sister. She looked worn and anæmic; no evidence of any delusions or hallucinations was present. She was very emotional: said she had a constant dread that she would kill her sister; was obsessed with a multitude -of other fears, e.g., of screaming in church, of assaulting strangers in trams, of breaking windows of trams or of shops in the town. Her mother told me patient had to be assisted to dress and undress. Patient herself explained this by saying that during the process of dressing and undressing herself she had to stop to pray against blasphemous and obscene thoughts that used to come into her mind. She had been operated on by a nose specialist some time before, because someone told her that her symptoms were due to obstructed nasal respiration. Hypnoidal treatment was employed the whole time in this case. She steadily improved, although she had several relapses during the course of treatment. She attended three times a week for six months, and twice a week for two months, and then once a week for another few months; then once or twice a month for a few monthslonger. She has enjoyed perfect health mentally and physically for the past few years. She nursed her mother during a long fatal illness, and has had other family troubles, which she has been able to go through without any mental derangement.

The Circulation of the Hands in Primary Dementia. By P. B. Mumford, M.D., M.R.C.P., Visiting Pathologist, Parkside Mental Hospital; Assistant to the Dermatologist, Manchester Royal Infirmary; Assistant, Manchester and Salford Skin Hospital.

An examination of a series of cases of primary dementia will reveal, amongst the other and more generally recognized characteristics, a deviation from normal in the colour of the hands. As a general rule, even in warm weather, the hands are blue-red in colour, colder than the average, and show an excessive moisture of the palms and contiguous surfaces of the fingers. These are commonly observed physical changes, but the mechanism of their production is but little understood.

Several interesting facts regarding certain physiological properties of their superficial blood-vessels are to be noted, as follows:

In the first place, it will be found that immersion of such hands in water at a temperature of about 42° C. results in the production of an intense arterial-tinted erythema over the areas so exposed. Secondly, mechanical pressure stimulation by stroking of these areas will be followed by a similar deep red and irregular blotching over the skin so stimulated.

The only possible explanation of these results lies in the fact that heat and moderate pressure stroking are both known to result in arteriolar and capillary vaso-dilatation. (Reddening of skin follows the application of these stimuli to any healthy skin.) The excessive erythema thus produced in primary dementia is a direct consequence of the existence of capillary paralysis (either partial or complete), and is analogous in every respect with the erythema which is produced by similar stimulation of the healthy hands after their prolonged exposure to cold. In each case some capillary paralysis of a temporary or permanent nature exists.

It should be remembered that the hand of a primary dement is cold, not because of low external temperature, but because of excessive local heat-loss secondary to enlargement of the capillary

bed. Were this heat-loss due to a need for heat excretion on the body's part (as in hyperthyroidism), then there would be an accompanying dilatation of arterioles of the skin. The hand is then red, moist and warm instead of cyanotic, moist and cold. There is a capillary dilatation only in the latter, whereas in the former there is accompanying arteriolar dilatation.

A further simple experiment which can be carried out on the skin of a primary dement consists in the application of the above-mentioned mechanical pressure stroke to other areas of skin, such as the anterior aspect of the forearm or the back. If a pressure of about 2 lb. be made on a cone-tipped wooden bobbin, and the pressing instrument drawn over the skin, several changes, due to alteration of vessel calibre, will follow—the usual one, a so-called "red and white tache," consists of a narrow line of erythema bordered at the edges by an area of paling due to capillary constriction. The red line will be seen in the course of a few seconds to take a slightly cyanotic tint. The latter change is due to a capillary dilatation of greater relative degree than the underlying arteriolar dilatation, and is produced by excessive reduction of oxyhæmoglobin—a slower flow through dilated capillaries bringing it about.

Comparison of the superficial reactions of the average individual, the individual with dementia præcox, and the hyperthyroidic person, shows a series of graduated changes. Briefly the relevant differences consist in alterations of size, colour and persistence of arterial tint. The individual with hyperthyroidism shows a wide-spreading arterial red tache, which is early in appearance and long in the persistence of its arterial tint. In marked distinction from this, the reaction in dementia præcox is poor in colour and size, and early takes on a cyanotic tint. Such difference implies a poor response of both arterioles and capillaries, an early contraction of the former, and poor return to normal of the latter after response. The average individual manifests an intermediate response.

It is thus clear that the superficial vessels in dementia præcox are poor in their response to external stimuli, and that the capillaries at least do not seem to retain their tone or their capacity for regaining tone after dilatation.

To dogmatize regarding the mechanism of these changes would be hazardous in the extreme, though certain relevant remarks may perhaps be made. Persistent dilatation of capillaries has been shown to result in a greater or less degree of capillary paralysis. It might thus be suggested that katatonia, by lack of muscular movement, fails to assist the return of blood from the peripheral areas, and would, in time, by mechanical back-pressure, result in a measure of paralysis. On the other hand, it may be stated that,

although the most severe vascular paralysis of the type described occurs in the stuporose types, it occurs with frequency in those who lead a comparatively active life, and even in those who are excited.

With regard to the influence, if any, of the thyroid gland, it must be remembered that the type of circulation commonly referred to as the "chilblain circulation" is frequently found in those who present symptoms of mild subthyroidism, and may be occasionally remedied by the oral administration of that gland. Dementia præcox is not usually associated with definite subthyroidism, and the circulatory condition cannot be entirely ascribed to a deficiency in that gland. However, individuals are found in whom there are clinical manifestations of hyper- and hypo-thyroidism, there may be a similar dysthyroidism in dementia præcox. lary tone has been shown by Krogh to be partially dependent on a substance which he terms "hormone X" which circulates in fresh blood, which can be dialyzed, and appears in many physical characteristics to be identical with pituitrin. There is no gross evidence of dyspituitarism in primary dementia, though it is conceivable that there may be some minor derangement of functional activity. Mott notes the existence of definite histological changes in the pituitary in dementia præcox.

The capillaries and arterioles are alike supplied with a nervous controlling mechanism, the fibres of which appear to run in the sympathetic nervous system. In view of the cumulative evidence of involvement of the sympathetic nervous system in dementia præcox, it is suggestive that in this particular vascular manifestation we have further evidence of derangement. In the abovementioned experiments of Krogh, however, it was shown that perfusion with adrenalin was not efficient in the maintenance of capillary tone. We can, somewhat speciously, suggest that an inefficient development of sympathetic fibres exists in this condition, and that, even though the necessary hormone exists in the blood-stream, yet insufficient tone persists—or, at all events, a tone insufficient to resist mild external stimuli such as are provided by exposure to the average atmospheric conditions in this country.

It would be of interest to know whether the circulatory changes above noted exist in warmer climates, and also as to whether the condition noted exists in the hands prior to the onset of mental symptoms.

#### Occasional Notes.

## The Royal Medico-Psychological Association.

Following the last Quarterly Meeting, which took place on November 17, 1925, a well-attended but informal dinner was held at the Langham Hotel, London, to commemorate that His Majesty had been pleased to command that the Association should henceforth be known as The Royal Medico-Psychological Association. Sir Frederick Mott, K.B.E., presided.

After the usual loyal toasts had been honoured, the toast of the evening was proposed by the President-Elect, Lt.-Col. J. R. Lord, C.B.E., in the following words:

" It seems a fitting thing to do on an occasion such as this, when a long-established Association has been granted a higher status and the position it has risen to and its achievements have been recognized in a signal manner by the Head of the State, to turn our minds to those who years ago laid its foundations, to imagine what their thoughts and feeling would be, could they be present, their pride and gratification, and their satisfaction at the realization of their aspirations and the fructification of their ideals; and then to do honour to them as builders of an edifice which has proved so enduring, and has still the vitality to press forward. Such is the position to-night in regard to the Royal Medico-Psychological Association. There are doubtless many present well acquainted with the early history of our Association and the facts regarding its foundation, but it is well that the younger members, who, in the course of time, will be called upon to assume the responsibility for maintaining the traditions and usages of the Association and to carry on its activities, should know something of the circumstances which gave rise to its inception, and of those worthies, now all gone to their rest, and, I fear, becoming forgotten, who founded it. I will briefly recall the position in regard to psychiatry at the end of the eighteenth and the beginning of the nineteenth centuries.

"As regards general medicine, the old-time notion which had prevailed throughout the Dark Ages that disease was a something foreign which had entered the body, and had, at all costs, to be driven out, still influenced treatment to a large extent—hence blood-lettings, sweatings, purgings, blisterings, and other reducing measures which were still largely practised, though to a diminishing extent. But the idea was gaining ground that much disease could

be viewed as normal body-processes endeavouring to carry on under adverse and unnatural circumstances, and that these normal processes needed to be strengthened and built up, and that under the watchful care of the physician the body would cure itself.

"The treatment of the mentally afflicted, however, remained entirely unenlightened, and the ideas of the Dark Ages were still in the ascendant in all their terrible malignity. The 'devil possession' notion guided all care and treatment. There was restraint and repression of every kind, some of it most ingeniously devised; blistering, purging, starvation, flogging, shock-baths, bleeding, and cruelties too horrible to mention were recognized as legitimate forms of medical treatment. That anybody in charge of the insane in those days could bend the knee and bare the head and offer up a prayer is inconceivable to us nowadays, yet the doctors, at any rate, were good-living and respectable men, many of them held in high esteem; so ingrained was the heritage of religious bigotry that both justice and humanity were dethroned.

"But the period 1798 to 1835 saw the beginning of the salvage of an ancient and honourable branch of medicine from the dominance of superstition and cruelty, and psychiatry began once more to take its place among the medical sciences. I need not detail to you the work of Pinel in Paris, of Tuke at the Retreat, of Fox at Brislington House, or speak of that humanitarian movement in this country which owed so much to Lord Ashley, afterward the Earl of Shaftesbury, for its success; sufficient to say that from 1823 onwards county asylums began to dot the country-side. Gardner Hill and Charlesworth at Lincoln in 1835 commenced the non-restraint treatment which was taken up and perfected by Connolly at Hanwell, whose influence and writings led, in a few years' time, to its general adoption through the land.

"In the year 1841, a memorable one for psychiatry in these Isles, the non-restraint treatment was on the ascendant, and the public gaze was directed towards lunacy matters, much as now. The great Lunacy Act of 1845, often called the Magna Charta of the Insane, was being conceived, and the medical superintendents of the newly created asylums and the other mental institutions felt they ought to meet together for the common good of their profession, their institutions, and the patients under their care.

"The first definite step in this direction was taken by Dr. Samuel Hitch, the Resident Physician of Gloucester General Lunatic Asylum, who addressed a circular letter to 88 medical men engaged in the treatment of the insane. The outcome of this circular was a small gathering at Gloucester on July 27, 1841, at which there were present:

"Dr. Shute, Visiting Physician of the Gloucester Asylum (in the Chair).

Mr. S. Gaskell, Superintendent, Lancaster Asylum.

Dr. S. Hitch, Medical Superintendent, Gloucester Asylum.

Mr. Powell, Superintendent, Nottingham Asylum.

Dr. Thurnam, Medical Superintendent, York Retreat.

Dr. Wintle, Medical Superintendent, Oxford Asylum (Warneford).

"Among the resolutions adopted was Resolution 3, which ran as follows:

"'That an Association be formed of the Medical Officers attached to Hospitals for the Insane, whose objects shall be improvement in the management of such institutions and the treatment of the insane, and the acquirement of a more extensive and more correct knowledge of insanity. That the medical gentlemen attached to Hospitals for the Insane be individually addressed, and requested to join the Association.'

"The First Annual Meeting was held at Nottingham, on November 4, 1841, at which Dr. Blake was appointed chairman, Dr. Shute, Treasurer, and Dr. Hitch, Secretary. The annual subscription was fixed at one guinea, and among others the following resolution passed:

"Resolution 14:

"That without pledging themselves to the opinion that mechanical restraint may not be found occasionally useful in the management of the insane, the members now present have the greatest satisfaction in according their approbation of, and in proposing a vote of thanks to, those gentlemen who are now engaged in endeavouring to abolish its use in all cases."

Colonel Lord then sketched the proceedings at subsequent meetings at Lancaster, Morley's Hotel (London), York and Oxford. At a meeting held at Oxford on July 21, 1852, it was decided to establish a journal, and Dr., afterwards Sir J. C. Bucknell, was appointed Editor. He then traced the history of the Journal, which was first issued on November 15, 1853, as the Asylum Journal (giving the contents of this number), and how it was changed in October, 1856, to the Asylum Journal of Mental Science, and again in 1858 to the Journal of Mental Science.

In 1865 the Association became the Medico-Psychological Association of Great Britain and Ireland, and on September 9, 1925, the Royal Medico-Psychological Association. Continuing he said: "I ask you to drink to the memory of six worthy gentlemen. Our early annals show that they were animated by the highest ideals in regard to the care and treatment of the mentally affected—ideals

which to us are still a precious heritage, and which throughout the history of the Association they founded have been fruitful in the art of healing and for the welfare of humanity. To the memory, then, of Drs. Hitch, Shute, Thurnam and Wintle, and Messrs. Gaskell and Powell." The toast was duly honoured.

For fuller details of the early history of the Association members are referred to our number dated April, 1896 (vol. xvii, p. 241), in which will be found an article by Dr. T. Outterson Wood, whose painstaking research on this subject, for which the Association owe him a debt of gratitude, has preserved to us for all time the annals of the Association from the time of its first inception to the publication of the Journal which has since recorded the transactions of the Association. We also reproduce as a frontispiece to this number an excellent photograph of Dr. Samuel Hitch. Sir J. C. Bucknill's recollection of him to Dr. Outterson Wood was "as an able, busy, bustling, intelligent man. In stature he was small, and he had red hair." He served the Association as Secretary from its foundation (Joint Secretary from 1847) and Treasurer from 1844 to 1852, when he resigned both posts. He continued a member until 1871, but nothing further regarding him can be gleaned from the Annals of the Association since that date.

# The Royal College of Physicians, Edinburgh.

WE learned with the greatest satisfaction that Prof. George M. Robertson, M.D., F.R.C.P.Edin., Professor of Psychiatry since 1919 in the University of Edinburgh and Physician-Superintendent of the Royal Edinburgh Hospital, had been elected President of the Royal College of Physicians, Edinburgh. He became a member (and a very active member) of our Association in 1887, and has been closely associated, if not identified, with its work ever since, and has seldom missed either a quarterly or an annual meeting. The Association elected him its President in 1922, and the annual meeting of that year, which took place at Edinburgh, will be long remembered as one of the most instructive and enjoyable, owing largely to the personality and hospitality of its The Association and Psychiatry owe much to the President. abilities and zeal of Prof. Robertson, and a further evidence of the latter is shown by the readiness with which at short notice he consented to deliver the Maudsley Lecture for 1926, owing to Sir John Macpherson being unable to fulfil this engagement.

As President of the Royal College of Physicians of Edinburgh, he has followed in the footsteps of several of Scotland's greatest

psychiatrists, and incidentally in those of his illustrious predecessor, Sir T. S. Clouston.

Psychiatry, which has been called by Dr. C. Hubert Bond the Cinderella of medicine, is immensely strengthened by such recognitions, and brought nearer to the folds of general medicine, from which it should never have departed—an estrangement which has never been so marked in Scotland as in England. To-day it scarcely, if at all, exists in the former, which is largely due to the thoroughly systematic teaching of psychiatry at the medical schools in association with the mental hospitals attached to them for this purpose—an ideal difficult of attainment elsewhere. We offer Prof. Robertson our congratulations, and wish him a happy and successful term of office.

## Psychiatry and the Public.

If the relationship of psychiatry to law reflects a lack of progress, what can be said of the public attitude to our branch of medicine? It is disappointing, to use a mild expression, to find a recent leader in a highly respectable daily journal, referring to the devoted men who have laboured for psychiatry in the past as "keepers of madhouses." Such an expression applied to the memories of a Maudsley or a Mercier can only reflect a deplorable ignorance on the part of educated public opinion.

A novel has lately appeared, written by a distinguished author, and dealing with the adventures of an elderly psychotic who is finally admitted to a mental hospital. The terms in which the descriptions are written are disquieting and reminiscent of the past. Prejudice and unfamiliarity with existing conditions indicate the want of sympathy and understanding shown by a section of the general public to the psychiatric physician and his work.

Yet both articles and novels, hostile though they be in some respects, are portents of a growing public concern for the welfare of the insane. This interest is undoubtedly the main contribution that the Great War has given to psychiatry. The neuroses of war added little to the knowledge of the psychiatrist. It may be that something was learnt of the influence of fatigue, exhaustion and stress upon the mental health of large bodies of men; something, too, was learnt of the diffuse lesions produced in the nervous system by the effects of severe concussion. But to the public the appearance in their homes of large numbers of mentally afflicted soldiers was a new thing. The success in treating these war cases has been largely due to the fact that treatment was early, even immediate, and was often dramatic in its results. The deaf were made to hear,

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the blind to see, and the palsied to walk. Public interest was aroused, and has spread to those members of the community who suffer from mental disorder necessitating hospital care. How are they housed and fed? Why are they not cured? Why is their liberty curtailed? What has happened to the doctors? Such are the questions that are being asked, and the public is eager for information.

The first step should be to insist on the fact that insanity is no peculiar horror, no strange plague that strikes down without cause or warning. From the "shell-shocked" soldier to the maniac of popular imagination there is but a difference of degree. Both suffer from mental disorder, and for both there is good hope of amelioration and cure. Destructive criticism is easy, but of little value in shaping the future. We want public co-operation, financial aid for research, generous contributions to the funds of mental institutions, and above all the trust that has been happily given to medical men in every other branch of medicine.

[Extract, Presidential Address, Section of Psychiatry, Royal Society of Medicine, by Dr. R. H. Cole, November 10, 1925.]

#### Part II.—Reviews.

The Second Report of the Inspectors of Lunatics (Northern Ireland) for the year 1923.

The total number of insane shows a net increase of 14, the males having increased by 42 while the females decreased by 28, the actual number remaining under treatment on December 31, 1923, being 4,291.

The admissions numbered 814, and were composed of 423 males

and 391 females.

The discharges numbered 215 males and 242 females. Of the total, 310 were discharged as having recovered. As calculated upon the number of admissions, the percentage of recoveries was 38.1. For 1922 it was 37.0.

The institutions inspected were the six district asylums and one licensed house. A separate report of each is appended. In addition there are some 204 insane accommodated in the various workhouses.

It is satisfactory to note that a reduction of 18 has taken place in these numbers as compared with 1922. In only a few of these instances were cases found requiring mental hospital treatment.

The total expenditure, including that incurred in the repayment of loans, came to £221,934 2s. 5d., showing a reduction of almost £20,000. The net average annual cost per patient, excluding loan repayments, was £43 15s. 2d., compared with £48 15s. 2d. for the preceding year. Judging from the short summary of the condition

of each asylum, a high standard of efficiency exists in Northern Ireland—a state of affairs upon which the staffs may be congratulated.

It may seem somewhat surprising that there should be only one licensed house in Northern Ireland. This, however, must not be taken as a criterion of the amount of insanity prevailing amongst the upper classes, as a large number of patients find their way to Southern Ireland, and, perhaps to a greater extent, across the channel to Scotland.

It is a pity that the term "asylum" should still be used in the report. Possibly there is some legal point that necessitates its retention. In Southern Ireland it has practically disappeared, and the use of the term "mental hospital" has proved advantageous to both the institutions and the patients they accommodate.

Principles of Psychotherapy. By Pierre Janet. Translated by H. M. and E. R. Guthrie. London: George Allen and Unwin, Ltd., 1925. Demy 8vo, pp. 322. Price 10s. 6d.

In the Middle Ages there was a medicament called "theriac." It was supposed to be a general cure-all, because medicines had been put in it by the hundred. The old blunderbuss prescription which contained a dozen or more drugs was a similar remedy, and was given in the hope that one of the shot with which it was loaded might hit the disease, and that the others might prove harmless. Prof. Janet says that most psychotherapy is a psychological theriac. Whilst stating that the claims of Christian Science, Lourdes, and other like agencies are largely exaggerated, he admits that there are some real cures. These are recognized by every observer to be brought about by psychological agency, but all the powers of the mind are used. How much better to use mental healing, not haphazard, but in a systematic fashion!

This is no easy task, and Janet does not imitate those ungracious pastors who "show the steep and thorny way to Heaven" and then leave us to our own devices, but he has given us this book on psychotherapy.

The book has three divisions:

The first gives an historical survey, beginning with the miracles at the temple of the Asclepieion at Epidaurus and ending with Freud. It is, of course, impossible for the author to include everyone in this summary, but it is surprising that there is no mention of M. Coué. Prof. Janet gives a fair and detached description of many different methods of treatment, but in one particular his judicial attitude deserts him, and this is when he is discussing Freud. He implies that the roots of psycho-analysis are to be found in mesmerism, and this will strike most readers as somewhat far-fetched.

The second division deals with the principles of psychotherapy. Here the task is to analyse and discover what are the potent items of the psychological theriac. He discusses suggestion and

hypnotism, which are not the same thing by any means. He then develops at considerable length his ideas on the subject of the mental budget. The State, the business house, the home, the individual, all have their economic budgets. Similarly every man should keep a mental budget—income on one side, expenditure on the other. Some born into the world "with silver spoons in their mouths" can afford to be extravagant; others born in poverty have to be careful to avoid bankruptcy. Translated into mental terms, he who has a good heredity can take risks that the man with bad heredity must not run. Psychological medicine generally has to deal with those whose revenue (heredity, staying-power, etc.) is poor, and the problem is to find out what are the more severe forms of mental activity by the avoidance of which, the expenditure can be reduced. Complete rest and isolation will act in this manner.

It is almost unfair, however, to try to make a summary of the work; it should be read in full by everyone interested in mental disease.

The final part deals with the application of the principles to treatment. Here Janet is at his best. He insists strongly that before any progress can be expected, definite diagnosis must be made. Some forms of mental disease require rest, others require stimulation, others again will best be dealt with by means of re-education. He does not deride the value of the discovery of a traumatic memory, which he compares with a liquidation in the financial sphere. Hypnotism, though at low ebb at the present time, is still of value in selected cases.

Janet collected the records of 3,500 neuropaths. Hypnotism had cured 54 in a manner so rapid as to have the appearance of the miraculous. In addition 64 were cured more slowly, but quite effectively, and there were 250 who, though not completely cured, were relieved of many of their worst symptoms.

The book is full of interesting and instructive material, which will be of the greatest value to all those whose work is the healing of the mentally sick. It is hoped that it will have the large circulation it deserves.

The translators have done their work well and there is an excellent index.

R. H. Steen.

An Introduction to the Mind in Health and Disease. By T. Wadde-Low Smith, F.R.C.S.Eng., Deputy Medical Superintendent of the City Mental Hospital, Nottingham. London: Baillière, Tindall & Cox, 1925. Illustrated. Pp. viii + 235. Price 10s. 6d. net.

This volume is written in the hope that it may stimulate the interest of students in psychiatry, and aid the general practitioner in forming an opinion of the cases of psychic origin, especially vagotonia, which come under his observation in his daily round. The book is written in text-book form, though its subject-matter is dealt with in a manner which differs from the conventional

approach to psychiatry, as the author aims to combine into a unity neurological and psycho-analytical explanations of human behaviour. The first part contains an elementary account of the anatomy, histology and functions of the nervous system; the glands of internal secretion; the functioning of the nervous system as a whole; the mental functions, repression, and the various psychic mechanisms; and the personality. The second part is devoted to abnormal psychology, and includes brief descriptions of the various forms of mental disorder and their treatment.

Though the author writes from a standpoint which he has no doubt found personally helpful, we do not feel that the book as a whole is altogether suited to the needs of the general practitioner. The clinical descriptions are scanty and lifeless, and the references to treatment inadequate. Thus only two and a half lines are devoted to the treatment of infection and exhaustion psychoses. and the need of seeking for and eliminating areas of focal infection is not mentioned. This subject would naturally appeal to the general practitioner, and would probably interest him more than the theoretical views developed in this volume. We do not wish to minimize the importance of these views, however, and Dr. Smith is rightly insistent on the need of regarding mind, not as an entity in itself, but as a function of the organism, and the disordered mind as the expression of a mal-functioning organism. same time, his desire to emphasize the body-mind relationship would seem to be responsible for somewhat unsatisfactory definitions and descriptions of psychological processes, as, for instance, when he states that "by attention is meant the condition of the cells of the associative areas of the brain so as to be able to take over the afferent impulses." Attention is not of course a condition of the nerve-cells; it is a reaction on the part of the organism as a whole, or the assumption of an attitude of readiness for action. The same preference for neurological language no doubt prompts the writer to advise the psychiatrist "to think with the patient's brain-cells as well as his own." Apart from the fact that this is an impossible feat, his meaning would have been clearer and more accurately expressed if he had advised him in psychological language "to try to understand the patient's point of view."

Though there are certain features in the author's treatment of his subject which suggest criticisms, his general outlook is interesting and suggestive. On the whole we are inclined to feel that an elementary text-book is scarcely the best medium in which to develop the views outlined in this volume, and probably these would have been more suitably embodied in monograph form. H. Devine.

An Introduction to the Study of the Mind. By WILLIAM A. WHITE. New York and Washington: Nervous and Mental Disease Monograph Series No. 38, 1924. Medium 8vo. Pp. v + 116. Price \$2.00.

The progress of dynamic psychology in America owes a great deal to the writings of Dr. William A. White. In this monograph

the position in this respect is brought up-to-date in a remarkably readable and persuasive form, but with strict regard to conciseness and simplicity, for the book is primarily written for medical students, social workers and others interested in the wide problems of mental hygiene, and also for the information of the public at large. It loses nothing, however, in force by being simple—in fact, being readily understood, its potentialities are greater.

Our author's views are well known, and have been for long set forth in his larger works, such as his Mental Mechanisms and his Poundations of Psychiatry. He has also collaborated with Dr. Smith Ely Jelliffe in the production of that standard work in America known as Jelliffe and White's Diseases of the Nervous System, now

in its fourth edition.

Dr. White is an individual psychologist who looks upon the mind from the view-point of the total reactions of the individual to his environment, failures of which call forth those morbid mental and physical phenomena which come within the purview of the psychiatrist and neurologist, and as an exposition of this aspect the book can be highly recommended to our readers.

J. R. Lord.

Peculiarities of Behaviour. By WILHELM STEKEL. Authorized English translation of the 3rd German Edition by James S. VAN TESLAAR. London: Williams & Norgate, Ltd., 1925. Demy 8vo. Vol. i, pp. xiv + 328. Vol. ii, pp. x + 341. Price 30s.

Dr. Stekel was a member of the little band which originally gathered round Freud. He suggested and belonged to the first psycho-analytical society, and edited the first psycho-analytical journal.

In later years, like Jung and Adler, he disagreed with Freud's theories, but his writings still owe a large part of their inspiration to his old friend and teacher.

This book deals with aberrations of conduct, such as kleptomania and pyromania, and the aim of the author is to prove that these impulsive acts have their roots in disorders of the instincts and emotions.

These terms he refuses to define—he dislikes definitions—but he

gives us his views about them at some length.

Instinct is the sign of life—indeed it is life; it is a purely organic function, and is the guardian of the physical life. Hunger is not an instinct; it is the manifestation of an instinct. When hunger is satisfied, appetite is lost, but the instinct of nutrition is still in existence. The affect is the intellectual elaboration of the instinct. There is no affect which does not feed upon instinct.

There are but two instincts—the life instinct, and its opposite, the death instinct. The life instinct expresses itself as the innate craving for happiness, and its two most important manifestations

are hunger and love.

Impulsive actions are manifestations of psycho-sexual infantilism; those subject to them are anxious to revive infantile euphoria.

The above is a somewhat sketchy outline of the contents of the first chapter. The rest of the book deals with dromomania (the impulse to wander), narcotomania (drug addiction), stealing (theft), kleptomania and oniomania (buying mania), pyromania (arson), gambling, and tics.

Numerous clinical examples are cited. In all there are 117 of these, and some are given at considerable length and minute

detail: over 100 pages are devoted to one patient.

The final chapter discusses as to what extent the unfortunate subjects of these impulses are criminals. Is the kleptomaniac a thief? Dr. Stekel has no doubts; the people he describes are suffering from an illness—they require treatment, not prison.

The thief and the kleptomaniac differ in many respects: the thief rejoices, not in the act of stealing, but in the profit he gets from the stolen goods; he thinks out a plan of campaign; is not emotional, but must be cool. The kleptomaniac steals for the joy of stealing—the value of the stolen article matters but little; he is in a dreamy emotional state, and under the influence of his emotions his intellectual being is in abeyance. The theft is an impulsive act. Finally the kleptomaniac is often curable by means of psycho-analysis and re-education.

Opinions differ about the claims of Dr. Stekel and his fellow workers; but it must be admitted that it is in vain we look elsewhere for the explanation of such irrational acts as those committed by the kleptomaniac, the pyromaniac, and the others; and as for treatment, there is none.

This book is a determined effort to solve a perplexing problem, and for those whose work lies among borderline cases and for the criminologist it is indispensable.

Dr. van Teslaar is to be congratulated upon the excellent manner in which he has performed a difficult task. Except for the announcement on the title-page, no one would suspect he was reading a translation. May we suggest that in a future edition an index would be a help, and that the useful glossary at the end might be expanded with benefit?

The concluding pages rise to a high degree of eloquence. Dr. Stekel mourns over the social state of the post-war world. As the individual can only be cured by understanding the nature of his illness and by turning destructive forces into creative channels, so the healing of the nations will come through similar means.

"The physician who understands the human mind, above all, is the one best prepared for this mission." R. H. Steen.

The Young Delinquent. By CYRIL BURT, M.A., D.Sc. London: University of London Press, Ltd., 1925. Pp. xx + 643. Price 17s. 6d. net.

It is not so long since the reproach might have been justly made

that, in this country, we produced no books on the problems of delinquency, and that in this respect we were behind other countries, and especially behind America. This cause for shame is—or so we venture to think—rapidly being removed from us. The workers engaged on the elucidation of these problems in this country are proving that they appreciate the nature of delinquency, and the light which modern psychology has shed upon its causative factors. Of this band of workers, Dr. Burt is one of the most eminent. And his latest book is a notable contribution to our science.

The key-note of the book is that the problem of the young delinquent, like the problem of the delinquent of any age, is a study in psychology. Delinquency is but one form of anti-social conduct. All abnormal conduct tends to be anti-social. This present book is the first of a series of three, the succeeding volumes of which will deal with the backward and defective, and the unstable and neurotic child. Dr. Burt realizes that it is not only the skilled psychological examiner who is concerned with the question of juvenile delinquency, but also the magistrate, the probation officer, the teacher, and the parent. So the book presupposes no special technical knowledge. The appeal to so wide an audience has advantages. It also has one disadvantage, which we will indicate later.

Works on the subject of delinquency may be written in two ways. They may deal with general principles, or they may be based upon the study of particular cases. This book approaches the question from both points of view. It contains a most illuminating discussion of the former, and it provides us with a minute analysis of 197 cases of juvenile delinquents (123 boys and 74 girls). number is, of course, small, and is far less than the 1,000 cases upon which Healy's great work was based. But the figures are even more valuable than Healy's. For they are checked by, and compared with, the results obtained by the examination of 400 control cases, of children who lived in the same streets, and attended the same schools as the delinquents. The inclusion of these control observations renders the book of unique value. A complete absence of adequate control investigations has been a radical fault of much previous work in this line. Had Lombroso considered a due number of control observations, the conclusions which he drew might have been less sweeping, but would better have stood the test of time. Further, the delinquent cases have been, as far as was possible, followed up, so that the results, good or otherwise, of the treatment adopted are, in part, known.

Delinquency is not the result of chance. The author, while not committing himself on the general question of determinism, points out that certain environmental conditions, reacting with certain mental tendencies, may result in a criminal outburst. The understanding of any case, therefore, implies a full investigation of the offender's past, a careful survey of the present situation, and a trial scheme of recommendations for future treatment. It is a big programme, but nothing less is of any real avail.

The "born criminal" was a favourite and pessimistic conception of some of our predecessors. Dr. Burt, like most modern writers, will have none of it. He holds, quite definitely, that crime is never inherited. Even direct imitation by a child of parental crime is quite rare. All the supposed phenomena of inherited criminality can be explained in other ways. As is the case with nearly all books on this subject, the famous Jukes family is referred to. As a fact, much of the alleged evidence concerning that family was mere "hearsay," and the deductions drawn were such as Dugdale, the original worker in this field, never contemplated.

The author then takes up the question of environmental conditions, both within and without the home. He deals with the influence of parental alcoholism and neglect, of defective family relationships (this latter being, in our experience, a most vital factor), of lack of facilities for recreation, of poverty, overcrowding, and the like. Although written in scientific language, and with no suspicion of sentimentality, this part of the book is extremely depressing. It reveals a condition of affairs of which the greatest city in the world might well be ashamed, and which can only be regarded as an appalling national danger. When we consider these points, the correlation between crime and overcrowding. which Dr. Burt works out for us, is not so high as might reasonably have been expected. When we reflect upon the almost complete absence of privacy in the lives of a large percentage of the population of London, we may perhaps wonder at the fact that, in the worst district, but 4 per 1,000 of the juvenile inhabitants are proceeded against for crime, and this includes offences of a technical character. It is aptly remarked that many of the exploits of Stalky and his companions, had they been indulged in by boys attending an elementary school, would quickly have brought their perpetrators within the purview of the criminal law.

The treatment of delinquency often requires alteration in the environment. Dr. Burt wisely points out that this may involve matters quite other than the mere provision of adequate food and In this connection, as in all others, it must never be forgotten that it is not by bread alone that man lives. It may seem strange to learn that the provision of some cheap finery, or of opportunities for amusement, may be of far more importance than food and shelter, but so it is. The vexed question of the influence of the cinema is handled in a judicial manner, and it is pointed out that we must not be unduly ready to accept this, or any other "explanation." It may often be that the excitement provided by the cinema is a mode of expression for already existing fantasies, rather than the cause of these fantasies. Betting is regarded by Dr. Burt as an unmixed evil. He points out that it brings the child into contact with all the machinery of an illegal trade. may add that it introduces him to the amazing national hypocrisy (no other word will serve) which punishes the street bookmaker, while allowing racecourse and club betting to proceed untouched.

Lack of employment has always been a factor in the production of crime. But we are now faced with a most serious state of affairs.

Our young people have, in many cases, been allowed to leave school and to grow up without having done any work at all, and with the idea presented to them that it is quite possible to live without working. The provision of compulsory education classes, for boys and girls who have no prospect of work, seems an urgent need. Uncongenial work, work which requires too large a supply of intelligence, or which, on the other hand, is unduly simple for the worker's intelligence, is dealt with. The latter condition is far more frequent than is generally known, and the anti-social grudge so produced may have far-reaching consequences.

The times of the day, and of the year, at which offences tend to be committed is of interest, and tables are given which deal with these points. It is found, in London, that 45% of all offences by juveniles are committed on Saturdays and Sundays. The inference is obvious. Dr. Burt sums up his discussion of the environmental conditions of crime by urging that the same authority which investigates and adjudicates the affairs of the young offender should have power to remove evil external influences; "without such power, the proceedings of the police court are bound to become

a solemn but impotent ceremonial."

The question of physical condition is then considered. a discussion of the influence of various physical disabilities in the production of delinquency. Dr. Burt tends to an epiphenomenalistic Without discussing the fascinating question of the psychophysical relation, we may, perhaps, point out that another view is possible, on which physical conditions may be regarded as being but a part of the environment with which the mind has to deal. Even in the case of the aberrations of conduct which occur after encephalitis lethargica, and which seem to supply such conclusive evidence of a direct connection between an organic cerebral lesion and a loss of moral control, there is another, a psychological explanation. The question is too wide to be entered into within the limits of a review. But we may say, in Healy's words, that conduct (including criminal conduct) is invariably the result of mental life. No so-called cause of crime can operate except in so far as it affects the offender's mental life. With this view we take it that Dr. Burt would agree.

Passing to intellectual conditions, the author discusses the question of intelligence tests. He adheres to the Binet system, modified for use with British children. It is probable that, for children, this system is the best which has yet been devised, although in the case of older offenders it has many drawbacks. The revised Binet scale has the advantage of being standardized, and of expressing intelligence in terms of "mental age." But Dr. Burt is well aware of the danger of a mechanical application of this scale, and he urges the necessity of supplementing the Binet scale with other tests, particularly tests of a performance character. This danger of misinterpretation of the results on the Binet scale is very prominent in dealing with the "verbalist" type of offender, of whom rather too short a notice is given, having regard to the great practical importance of this class. Dr. Burt points out that

intelligence tests do not measure emotional and moral conditions. The tests devised for the estimation of these latter factors are quite unsatisfactory, and are themselves nothing but intelligence tests. It is, however, possible that these other factors are, ultimately, dependent upon intelligence.

Dr. Burt agrees with all recent British workers that the percentage of mental defectives amongst offenders is much less then the estimate made by the Royal Commission on the Feeble-minded, and very much less than that given by American authorities. He finds, however, a markedly higher percentage of mental defectives amongst the delinquents than amongst the controls. He indicates the serious difficulties involved in the proposal, often most lightly put forward, for the sterilization of the mentally defective. He argues that the term "mental defect" in the legal definition of a "moral imbecile" should be extended to include temperamental as well as intellectual defect—a view with which we agree, bearing in mind the proviso mentioned above. It must always be remembered that the words of the legal definition require proof of the existence of a permanent mental defect coupled with (not evidenced by) strong vicious or criminal propensities. No doubt the logical plan would be to make a strong criminal propensity, upon which punishment has had no deterrent effect, ground in itself for permanent segregation. But public opinion is not, as yet, ready for this step.

One of the most valuable parts of the book is the masterly analysis of children's lies, which shows how futile it is to regard symptoms, without investigation of the causes thereof. Of the many case-histories in this volume, one which describes an instance of pathological lying is, perhaps, the most instructive.

All modern books which deal with the offender I would ultimately judge by the stress which they lay upon the theory of the unconscious, and upon the influence of mental conflict and repres-In this respect the present book is admirable. The account given of the various instincts, and of the corresponding emotions, is exceedingly clear. So also is the description of the formation of sentiments and complexes, and of the processes of repression and sublimation. This part of the book should give the magistrate or teacher an adequate view of the trend of modern psychological thought on these subjects. The author insists upon the importance of recognizing that elements of the sex instinct are present from the earliest period of life, and he points out that this instinct does not, as is popularly supposed, come into existence for the first time at puberty. But his treatment of the subject of sex is rather meagre. This, no doubt, is partly intentional, and is due to the extended circle of readers for which the work is written. It may well be that the exercise of "economy" on this topic is wise. Still, no comprehension of the delinquent is possible without a full understanding of the ramifications of the sex instinct. And we feel that a perusal of the book would leave the ordinary reader rather in the dark on this question.

And what of the applications of psycho-analysis to delinquents? The method requires to be handled with caution, though by no

means with fear. It is obviously necessary that those who employ the method should be persons of discretion, and of high character, although there is no branch of work with delinquents in which these conditions are not desirable. Psycho-analysis is so beset with prejudice that it is better, as Dr. Burt says, to avoid the use of the dread term, and to speak of "mental analysis." The method has two distinct lines of usefulness. It has proved to be of eminent service as a means of diagnosis. We should still have been working in the dark, had it not been for the hypothesis of the unconscious. To take one example, there is nothing which puzzles even the educated and unprejudiced layman more than the matter of substitution delinquencies. It is easy to explain how a repressed sex complex may lead to the commission of offences of a sexual character. It is quite another matter to see how offences of a character apparently quite unconnected with such a complex may result from its working. This latter process, of which there is abundant evidence, could never have been elucidated but for the Freudian hypothesis. But psycho-analysis may also prove to have its uses as a therapeutic measure in delinquency cases. The time has not yet come for any final pronouncement in this direction. Any such procedure will require the provision of services which are not, as yet, available. All we can say is that there is good evidence that selected cases will benefit by analysis, even although it may not be a short and easy road to the eradication of delinquency. Dr. Burt found that a complex was a major factor in about 12 %, and a minor factor in more than 50 % of his delinquent cases, while complexes were found in only 18.5% of the controls. In both classes, the influence of complexes was decidedly more marked among the girls. There would seem to be an opening here for the services of trained women psychologists.

The object of the investigation of offenders is the arrangement of measures of treatment. Enlightened opinion no longer conceives of a court of law as being merely concerned with serving out punishments for specific acts. A particular delinquent act is only a symptom, and may be quite an unimportant symptom. The author puts it admirably, when he says that we have to look, "not at actions, but at mental states," and again in the words, "Life is one, a single flowing stream, not an aggregate of discrete faculties." Punishment is sometimes necessary, and will, perhaps, always continue so to be. But only investigation can prevent punishment from being, what it too often has been, nothing more than an instrument of blind vengeance. "The true object of the treatment of the delinquent is the sublimation, and not the suppression, of his provocative instincts." We note, incidentally, that Dr. Burt is averse to corporal punishment, but would deprecate its entire abolition, holding that there are certain cases in which it would appear to be indicated. He also urges the immediate provision of some institution for the treatment of character disorders supervening upon encephalitis lethargica; these cases are, at present, quite inadequately dealt with. The establishment of psychological clinics is strongly advocated. But we cannot agree that the outpatient departments of certain hospitals would, in any way, supply this want. As things now are, such departments are often staffed by physicians who not only have no interest in psychology, but indeed are prejudiced against the science.

The account which we have given of this excellent book is hopelessly inadequate. There is not a single page upon which something illuminating and helpful will not be found. All who are interested in modern psychology should read it; the interest extends far wider than the immediate topic of delinquency. The book is written in that lucid and delightful style to which the author has accustomed us in his former works. And the make-up of the volume reflects the utmost credit on the publishers.

M. Hamblin Smith.

Trial of Ronald True. Edited by Donald Carswell. Edinburgh and London: William Hodge & Co., Ltd., 1925. Pp. xii + 295. Price 10s. 6d. net.

We welcome the appearance of the latest addition to the series of "Notable British Trials" published by this firm. The case of True possessed an interest quite unconnected with the sordid details of the crime itself. It reopened, in an acute form, the old dispute as regards the criteria of "irresponsibility," and thus occasioned a controversy, the end of which is not yet in sight. This book, containing a complete account of the trial, and of the subsequent proceedings, will be of great value to all students, whether they approach the problem from the medical or the legal standpoint. It is particularly helpful to have an exact transcript of the evidence, and of the legal arguments at the trial, taken from the official shorthand notes. The book also contains the full report issued by Lord Justice Atkin's committee.

The actual facts of the True case are well known, were not disputed by the defence, and were briefly described in the issue of this journal for July, 1922. The interest of the case lies in the light which the trial shed upon the questions involved in the legal conception of irresponsibility, and the executive measures for dealing with insane prisoners. We may note that the evidence contained abundant proof of True's mental instability for some time previous to the crime. He had been, for years, a morphia habitue. And it seems likely that had adequate inquiry been made into his mentality at an earlier stage, and especially when he was fined at Portsmouth, in 1921, for forging prescriptions, his insanity would have been established and the subsequent tragedy obviated.

At the trial, the main battle raged around the question as to whether True's mentality was such as to bring him within the scope of the McNaughton criteria. This battle had two phases. The first dispute was as to the precise meaning to be attached to the words, "knowing the nature and quality of the act." Did the word "knowing" mean, in this connection, simply a knowledge of the physical character of the act in question? Or did it imply, as the late Mr. Justice Stephen claimed that it should imply, the "power

of calm and sustained thought" as to the character of the act? The second question was as to the meaning to be given to the word "wrong" in the McNaughton dicta. Did this word mean legally wrong—contrary, that is, to the law of the land? Or was the word to be taken in the sense of morally wrong, and, in this latter case, what is the meaning of the word "morally"? To enter into the merits of the dispute on these two questions would take us quite beyond the limits of the longest review. Nor is such an exposition required. Volumes have been written on the subject in the past. And the discussion has been largely inconclusive, because it is apparent that very few of the disputants have ever given any quiet, unprejudiced thought to the origin and development of the conception of morality. As everyone knows, the answers given by the jury resulted in the establishment of True's "responsibility," and he was sentenced to death. It has often been urged that a strict application of the McNaughton criteria would result in the establishment of responsibility for criminal acts committed by the majority of the inmates of our mental hospitals.

But the rules are not always applied with strictness. And we think it may be fairly claimed that they have usually resulted, at least during recent years, in substantial justice being done. It is true that we know more than did our forefathers in 1843. But when the time comes for a reform in our legal rules as to criminal responsibility, such reform should take the shape of an entirely new set of rules, and not of an amendment of the existing rules. The McNaughton bottle is antiquated. The inpouring of the new wine of modern psychological knowledge can only serve to burst it. To see this, we have only to consider the extensions which have been suggested. The Atkin Committee proposed that a person should be held irresponsible when the criminal act charged was "committed under an impulse, which he was by mental disease in substance deprived of any power to resist." The question of the existence of an irresistible impulse would give rise to disputes even more acrimonious than those which occur under the present rule, though we might look forward with delight to the discussions which would take place over the meaning of the word "substance." The test of the "loss of the power of self-control," which sounds so seductively simple, and is so alluring to the "man of plain sense," is really impossible. If anyone doubts this, let him try to put into anything approaching accurate language the statement about a man that "he could not control his actions," and the impossibility of the task will at once be realized. It is probable that the best test of irresponsibility is the presence of "certifiable" insanity, though there are objections even to this suggested criterion.

After True's death sentence, the then Home Secretary appointed a medical commission, under the Criminal Lunatics Act, 1884, sect. 2 (4). This commission having reported that True was insane, the Home Secretary exercised the discretion vested in him, and ordered the man's removal to Broadmoor. Mr. Carswell argues that the Home Secretary had no discretion in the matter, and that he was bound by the Common Law to respite the death sentence.

A number of authorities are quoted in defence of this view. It would, however, appear that, strictly speaking, the power of the Home Secretary is discretionary. But the matter does not seem to be of any great practical importance. It is unlikely that any Home Secretary would order the execution of a man found to be insane by a commission of his own appointment.

Some point was made, both at the trial and after, of the fact that the prosecution was unprovided with any evidence tending to rebut that given by the four medical witnesses, all of whom regarded True as being certifiably insane. Mr. Carswell informs us that the prosecution was in possession of a report from Dr. R. H. Cole, but did not see fit to place him in the witness-box. In mentioning unpublished evidence, which Dr. Cole might or might not have given, Mr. Carswell seems to be guilty of an error of judgment, and even of a lack of taste.

Having regard to the mass of detail, transcribed from shorthand notes, which the book contains, there are surprisingly few errors. There is one bad misprint, which, standing uncorrected, would render unintelligible a sentence in Sir Richard Muir's legal argument. An index of the chief points raised might, with advantage, have been provided.

M. Hamblin Smith.

Health and Psychology of the Child. Edited by ELIZABETH SLOAN CHESSER, M.D. London: Wm. Heinemann (Medical Books), Ltd., 1925. Crown 8vo, pp. 302. Price 7s. 6d. net.

The mottoes and sayings of all time bear witness to the knowledge that the events of early life have great influence on the ultimate character of the individual: "Plant an acorn and you must expect an oak." Opinions on the more important factors vary from time to time: those who note hereditary dispositions may incline to the doctrine of original sin and the incidence of the sins of the fathers upon the children; those who more particularly study nervous aberrations believe that the germs of evil are rather implanted in the young child as a result of mismanagement, however unwitting, than inherited directly as such. Unfortunately the two may coincide. The unstable irritable parent is rarely a wise counsellor. All are familiar with the spoiled child, and feel instinctively inclined to follow the advice from the book of Proverbs, but also all recognize the rebel and the neurotic, the products of suppression and repression.

The path of parenthood is not strewn with roses without thorns, and the mother who would open her mouth with wisdom and keep the law of kindness with her tongue needs information and guidance. The child learns by imitation and suggestion, by steady example rather than precept, and in its early years, if not throughout, through its emotions rather than its intellect. This lesson is taught with a wealth of illustration in each of the articles in the present volume, which is the work of experts in their several branches. The will and the moral sense arise out of self-consciousness, and the altruistic sentiments out of later arising self-forgetfulness. The

child identifies itself with its ego-ideal, as Dr. Hadfield emphasizes, so that the one brought up with its every act acclaimed as the mark of wonder believes in its own perfection and becomes snobbish, priggish and self-righteous, throwing the blame for its own faults always on others; while the one brought up to believe that its every action must necessarily be wrong, of whom the mother expects nothing, will not disappoint her expectations. Above all things consistent treatment is needed for mental health: if the parents are always bad, the child may become a criminal, but not a neurotic; if they are consistently good, he may become a saint, but not a hysteric. A house divided against itself cannot stand, and the child who learns to appeal to one parent against another may ultimately rebel even against himself. Adaptations cannot be forced, they must be acceptable, and the child needs to learn for himself, to secure which the parent must supply both understanding love and—which is the harder task—observant neglect. All concerned with child-training need a definite leaven of psychology such as is supplied in this book, which deals with topics ranging from the suckling to the adolescent, from the influence of the endocrine glands to the development of the religious ideal.

F. C. S.

# Part III.—Epitome of Current Literature.

# 1. Neurology.

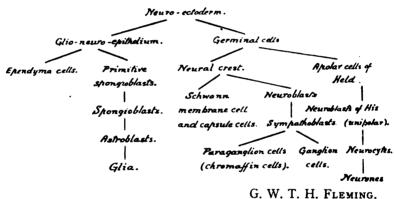
On the Nature of Abdominal Reflexes. (Arch. of Neur. and Psychiat., July, 1925.) Astwazaturow, M.

The author, having emphasized the evolution of the nervous system by the superaddition of new elements to the old ones, states that in pyramidal tract lesions there is a severance of communication between the neo-apparatus of the nervous system (the cortex) and the paleo-apparatus (the spinal cord) with the appearance of phylogenically old manners of reaction. That the abdominal reflexes are phylogenically new acquisitions is supported by the fact that the abdominal reflexes are absent in the domestic animals, in infants until the eighth month of life, when the child begins to sit up, and fail to develop when the child does not acquire the function of sitting up and standing. Recent work by Keith shows that the muscles of the abdominal wall, especially the transverse muscle, are of great importance in sustaining the viscera when the body assumes the sitting or standing posture. The abdominal reflexes are but a manifestation of the particular tone of the bellywall muscles, and have no special physiological purpose. When the tone is greatly decreased, the abdominal reflexes may disappear without any great disturbance in the sustaining of the viscera in the erect posture of the body. The disappearance or exaggeration of these reflexes in pyramidal tract lesions depends not on whether they are superficial or deep, but on their phylogenic antiquity. Hence the abdominal and plantar reflexes disappear and the tendon reflexes of the extremities are increased. With the disappearance of the abdominal and plantar flexor reflexes, there is an exaggeration of the defence reflexes.

G. W. T. H. Fleming.

Spongioblastoma multiforme. (Arch. of Neur. and Psychiat., August, 1925.) Globus, J. H., and Strauss, I.

A glioblastic tumour of the brain and spinal cord is described for which the name "spongioblastoma" is suggested. It is highly cellular, the cells being embryonal in type (spongioblasts), and occur in several transitional types. These cells assume various rudimentary patterns—alveolar, radial, rosette and palisadal. The tumour is characterized by acute onset, rapid growth, and early fatal termination. It is interesting to psychiatrists because of its occasional association with tuberose sclerosis, which itself is a form of diffuse spongioblastosis. The spongioblastomata are often described as glio-sarcomata. The authors give a very good table of stages of differentiation of primitive neuro-ectoderm into mature cellular units of the nervous system.



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On the Occurrence of Fits in Syringomyelia. (Journ. of Neur. and Psychopath., November, 1924.) Martin, J. P.

The author found in his series of between 20-30 cases of syringomyelia that fits had occurred in 4 cases. Probably 10% of all cases of syringomyelia have fits. The type of fit varied. Schlesinger quotes "tonic and clonic" fits, but the main and possibly only type is tonic. There may or may not be unconsciousness. A majority of cases seem to be preceded by headache for a few days. In all the author's cases the disease became much worse after the fit, probably showing that the disease process had become particularly active just before the fit.

In discussing theories of the fits, Martin dismisses the focal theory of origin in the pons. The fits are not dependent on involvement LXXII.

of any part above the pons, and below the pons no centres for the general regulation of tonus are known to exist. The fact that so many cases were associated with persistent headache suggests an increase of intracranial pressure as a very likely factor. In some of the described cases there was an internal hydrocephalus. These tonic fits very much resemble those of cerebellar tumour or basal meningitis, in which hydrocephalus is very common. Hydrocephalus is common in syringomyelia. The author concludes that these tonic fits are due to acute exacerbation of an internal hydrocephalus.

G. W. T. H. Fleming.

The Anatomy, Clinical Syndromes and Physiology of the Extrapyramidal System. (Arch. of Neur. and Psychiat., May, 1925.) Jakob, A.

All diseases of the extra-pyramidal system present characteristic disturbances of motility, associated with changes in muscle-tone. There are three forms of motility disorders: (A) Hypokinesia, (B) diminished or increased muscle tone states, manifesting themselves in either hypotonia or hypertonic rigidity, (C) hyperkinesia.

- (A) The hypokinesiæ consist of failure of innervation during voluntary movement, shown by slowing of the movement accompanied by easy fatigability. There is a lack of the reactive movements which follow reflexly all afferent sensory stimuli. There is also a failure of "assisting" movements, *i.e.*, those which accompany automatically every purposeful act.
- (B) Disturbances of tone may be either hypotonia as in chorea, or rigidity of individual groups of muscles. All the phenomena of hypertonicity play a significant rôle in the cataleptic attitudes of the patients, in adiadokinesis, in propulsion, and in retropulsion. Tremors and shaking phenomena of disturbed co-ordination are due to improper innervation of the antagonists.
- (c) The hyperkinesiæ appear as choreiform and athetoid motor restlessness, torsion spasms, hemiballismus, tics and myoclonias. Chorea and athetosis consist of two components: (a) Increased or hyperkinetic, (b) dissociated or ataxic. Torsion spasm and torsion dystonia are special forms of athetosis. Spastic torticollis is a partial manifestation of torsion dystonia. Hemiballismus designates the uncontrollable, inco-ordinated, twisting, massive movements involving an entire half of the body. Myoclonia and tic resemble chorea, but are limited to individual muscles or muscle groups. Clinically there are three syndromes: (i) The choreiform, (ii) the akinetic-hypertonic (Parkinsonian), (iii) the athetotic.

The entire grey substance in the basal ganglia is designated the extra-pyramidal system. There also exists a second extra-pyramidal mechanism in the form of the fronto-ponto-cerebellar system.

The extra-pyramidal system consists of the following grey nuclei:

- s. Striatum (caudate nucleus and putamen).
- b. Pallidum.
- c. Corpus Luysii.
- d. Substantia nigra Soemerringii.

The nucleus ruber indirectly belongs to this system.

The striatum is a genetically and morphologically uniform mass developed from

the same mass as the cerebral cortex, the alar plate of the prosencephalon. It contains infrequent large ganglion cells among numerous smaller cells. It derives its stimuli from special zones in the pallidum, and its outgoing fibres terminate in the pallidum. The afferent fibres terminate in the region of the small ganglion cells; these then exert their influence on the large cells; from these the striofugal fibres transfer the stimulus to the cells of the pallidum. The striatum then appears to be a highly developed regulating organ endowed with cortical characteristics and acting as a special cortex to the pallidum.

The pallidum belongs to the hypothalamic region of the diencephalon. It contains only one kind of ganglion cell. Afferent fibres come from the same

thalamic area as the afferent striatal fibres and from the striatum.

Pallidofugal fibres connect with the thalamus and the hypothalamus. The latter consists of numerous fibres to the capsule of the red nucleus, to the corpus Luysii, the substantia nigra, the nucleus of the posterior commissure and the oral part of the pons.

The corpus Luysii has a ganglion-cell structure similar to the pallidum. The chief afferent fibres come from the thalamus and the pallidum. Efferent fibres

pass to the capsule of the red nucleus and the substantia nigra.

The substantia nigra, lying at the foot of the pes pedunculi, is divided into two differently constructed zones—a zona compacta and a zona reticulata. The zona compacta has characteristic large cells containing melanin, and the zona reticulata is constructed like the pallidum.

The substantia nigra is the only one of these centres which has fibres direct from the cortex, from the centralis anterior, the operculum, and the posterior part of the frontal lobes. The substantia nigra also contains richly developed connections with the pallidum, corpus Luysii, red nucleus and thalamic nuclei. Descending fibres extend to the pes pedunculi, anterior part of the corpora quadrigemina and geniculata and the lemniscus area of the tegmentum pontis.

The nuclei of the posterior commissure, the nuclei Darkschewitschi and interstitialis receive their impulses from the nuclei of Deiters and Bechterew, and give

origin to the posterior longitudinal bundles.

The posterior longitudinal bundle descends in the cervical cord and establishes inter-relations between the nuclei of the eye muscles, and brings the vestibular apparatus into relation with the pallidum, the nuclei of the eye muscles and the spinal cord. It is the important co-ordinating tract of the whole motor apparatus of the mid-brain and brain-stem.

In the tegmentum of the mid-brain and brain-stem, there is a motor apparatus connected with the posterior longitudinal bundle which controls the harmonious distribution of tone throughout the body and regulates the precision of motions and positions.

The red nucleus is the most important organ of tone; it is the special centre for normal tone distribution. The rubrospinal tract of von Monakow. originating in the magnocellular portion of the red nucleus and crossing mostly in the decussation of Forel at the level of the red nucleus, is the efferent tract to the anterior horns of the spinal cord.

The red nucleus is also the chief terminal station and passage-way of the dentatum tract, carrying impulses from the cerebellum to the co-ordinating mechanism of the mid-brain. The red nucleus is also a projection centre from the cerebellum to the frontal lobes.

A review of the individual clinical syndromes and their anatomic localizations leads to the following conclusions:

Disturbances of the striatum.—These may manifest themselves in the following syndromes:

(1) Mild paresis of voluntary and involuntary movements; the synergic movements suffer most, while the isolated movements of individual members remain intact. (2) Inco-ordination of synergic actions, especially sitting, standing, walking, speaking, and all bulbar functions (striatal pseudobulbar palsy). (3) Akinesis. (4) Tremor and shaking; hypertonia and mobile rigidity. (5) Absence of reflex abnormality, sensibility and psychic disturbances.

(6) In the adult a striatal degeneration (especially of the small cells) constitutes the choreic syndrome with a mild form of akinesis and hypotonia. (7) Milder affections of the striatum produce parakinesia, the severity depending on the extent of the damage. (8) A slow destruction of the large ganglion cells of the striatum or of the whole striatum produces rigidity, which in the diffuse processes is marked. (9) Large apoplectiform lesions of the striatum produce contralateral flaccid paralysis, which may frequently regress and lead to rigidity (the striatum, as stated, having bilateral action), more marked on the contralateral side. (10) In the infantile, as yet undeveloped brain, pure striatal lesions produce athetosis with hypertonia.

Disturbances of the pallidum: (1) Focal lesions produce athetosis and torsion spasm with rigidity (contralateral to the affected side), and often limited to the individual limb, according to the localization. (2) Diffuse partial lesions of the pallidum produce general athetosis with a mobile rigidity. Diffuse complete lesions produce marked rigidity, followed by contractures. (3) Absence of reflex anomalies, sensibility and psychic disturbances and absence

of vasomotor and temperature disturbances.

Disturbances in the corpus Luysii produce hemiballismus.

Disturbances in the substantia nigra (especially of the zona com-

pacta) produce rigidity of the Parkinsonian type.

Jakob summarizes the physiology of the extra-pyramidal system as follows: We have in the dorsal part of the mid-brain and brain-stem an important motor co-ordinating apparatus, which, as the result of being stimulated proprioceptively, is the basis for all tone, station and posture. The red nucleus is the oral hypertrophy of this apparatus. In agreement with Magnus, we may consider the co-operation of the spinal reflexes, brain-stem and red nucleus reflexes in the distribution of tonus in standing and in posture somewhat as follows:

The spinal cord centres for an extremity are reflexly stimulated through the posterior roots entering at the same level corresponding to the flexion and extension centres. To this level a tract descends from the centres in the posterior portion of the brain stem, which would bring about a decerebrate rigidity if it were the only agent acting on the spinal cord. This tract would therefore displace the tonus distribution in the spinal cord in favour of the extensor muscles. But if, together with this, impulses should come from the red nucleus through the rubrospinal tract to the same spinal cord segment, the tonus distribution would be displaced rather towards the flexor muscles. To a certain extent the spinal cord centres are subject to two restraining forces—one having to do with extension and influenced by the medulla oblongata, and one having to do with flexion and influenced by the red nucleus.

The resultant of these two influences is a uniform tonus distribution in the innervated organs. In addition there are fibres from the pyramidal tracts which end in the same segment of the spinal cord and carry chiefly impulses making for flexion, as experiments on cerebral stimulation show.

The motor apparatus of the midbrain and brain-stem, especially the red nucleus, is influenced and stabilized by two systems:

(1) The cerebellum: The chief function of this proprioceptively stimulated organ is to intensify, to give position, and to inhibit the whole co-ordinating apparatus, and more especially in the matter of controlling specifically those locomotor synergies which are determined by the direction of the movements or the falling of the

body and its parts.

2. Our principal extrapyramidal system and its individual centres: This system is built up as a whole on the co-ordinating mechanism of the brain-stem and cerebellum, which it employs as a firm basis. The whole of this system, with the exception of the substantia nigra (which also receives direct cortical fibres), derives its stimuli from the thalamus and the hypothalamus. The hypothalamic basis of the diencephalon seems to us to be of great significance in connection with the central regulation of all the metabolic processes of the organism, and more especially of muscle tone. The thalamus serves as a large reservoir afferently and efferently connected with the entire cortex, and receives proprioceptive and especially exteroceptive and cerebellar impulses, all of which bring to it information concerning the position of the body, as well as the state of tonus of the total musculature and the deeper unconscious sensations. The thalamus is, therefore, an organ which not only orients the individual as to the changes in the state and tonus of his body, but also puts him in intimate relation with the outer world, this being of considerable significance for the sensations, feelings and emotions, and, in a certain sense, also for the faculty of attention, for psychic activity and for consciousness as a whole.

The extrapyramidal system thus appears to be a centre for the movements of expression, the reactive flight and defence actions, the pain-protection and fright reflexes, the automatic change of position and attitudes, assisting movements employed in locomotion, compulsive associated movements and the motor partial components, which play a rôle in the actions of sitting, walking, standing, chewing, swallowing and speaking. It also exerts a regulating influence on the vegetative hypothalamic centres which preside over the chemico-physical tonic processes, and is an organ for tone. It should be finally regarded as a part of the voluntary tract through which cortical impulses are directed on the anterior horn.

Hypokinetic and akinetic phenomena are to be attributed to a diminution of innervation due to a lack of stimulation from the extrapyramidal system and of discharges from its centres. The rigid components in the partial phenomena are based on the loss of the regulating function of the hypothalamic centres, the motor apparatus of the mid-brain and brain-stem, and of the cerebellar (Sicherung—stabilizing) protection through the extrapyramidal system.

Chorea is to be regarded as an ataxia of pallidal functions conditioned by the striatum, especially by the omission of the small receptive and associative ganglion cell elements of the striatum.

A tic is to be regarded similarly, but in this case circumscribed muscle areas in the striatum only are affected.

Complicated parakinesias are akin to choreiform phenomena and are to be attributed to a similar mechanism, but in these cases a milder damage to the striatum must be the main pathogenic factor. The more systematically the small cell degeneration in the striatum proceeds, the purer will be the choreiform character of the peculiar Tremor and shaking seem to be, in part at least, determined by the striatum, being ataxic disturbances of co-ordination of the pallidary and subpallidary centres (perhaps also as peripheral mechanisms of muscle innervation), wherein the injury to the large and small striatum cells of the contralateral side is the important factor. Similarly, the relative injury of the striatum on the one side and of the pallidum on the other also plays an important rôle. Tremors and pulsions are also to be found almost exclusively in conditions of the substantia nigra, and are evidently expressions of tone disturbances.

Congenital athetoses of early childhood are to be attributed, in the corresponding diseases, to the abolition of the regulating function which the striatum exerts on the pallidum, caused by pathological processes in the striatum. In such cases of athetosis, inco-ordinate and distorted mass movements similar to the mass

movements of earliest childhood occur.

The athetoses of later childhood, early adolescence and adult life are to be regarded, together with torsion spasm, as ataxic disturbances of co-ordination having a pallidal origin (disturbance of pallidary function), in which the interferences with the static and kinetic co-ordinating mechanism in the mid-brain and brain-stem are particularly prominent. In contrast to the athetoses of adults, which depend on focal pallidary lesions, the generalized athetoses of later childhood and adolescence, corresponding to the diffuse pallidary degeneration, show a preponderance of subpallidary mass movements and mechanisms of the brain-stem.

The choreo-athetotic phenomena which appear in connection with diseases of the region of the red nucleus, of the brachium conjunctivum (Bindearm) and of the tegmentum mesencephali (Hirnschenkelhaube), are ultimately to be referred to the brainstem, and to be attributed to the release of the mid-brain (red nucleus) and brain-stem from cerebellar control (Sicherung) on the one hand and pallidary control (Sicherung) on the other.

It is important to distinguish these diseases from those that are produced by lesions located on the oral side of the red nucleus, where the hyperkinesias are to be regarded as indirectly caused by failure of striopallidal functioning in the sense of ataxic disturbances; the akinesias then seem to be flaccid paralyses of the striopallidum.

On the basis of anatomical considerations and of lack of function in correctly localized pathologic processes, we may at present express the following views concerning the functions of the single

a. The striatum is the true centre for gestures of expression, reactive movements, etc. It also gives tone to the pallidum.

- b. The pallidum, which in the newborn is the centre for the primitive and inco-ordinated automatic movements of earliest childhood, becomes in the adult the centre for locomotor synergies of single muscle groups and portions of the extremities in the service of striate locomotor automatic acts, which are built on the locomotor synergies of the cerebellum and brain-stem. In addition, it also exerts a significant influence in regulating tone.
- c. The corpus Luysii apparently contrasts the locomotor synergies of whole sections of the body, with special emphasis on cerebellar balancing components.
- d. The substantia nigra is to be regarded especially as a tonecontrolling centre, which in a special way serves to determine the succession of movements.

  G. W. T. H. Fleming.

### 2. Psychology and Psycho-Pathology.

Psychic Representations of Movement and Posture. (Arch. of Neur. and Psychiat., July, 1925.) Hunt, J. R.

Hunt applies his well-known ideas of static and kinetic systems of movement to the symptomatology of mental disease. He divides perseveration into kinetic and static forms. The kinetic form is supplied by the continued repetition of a given movement-complex when some new act is intended, and in place of that act. This corresponds to the intentional perseveration of Liepmann. In other cases a particular movement or movement-complex, once it is started, cannot be inhibited. Static perseveration is seen in cessation or fixation of a movement. There is a premature postural fixation of a purposive movement before the purpose of the movement has been carried out. Kinetic and static correspond to the active and passive of Wilson and Walshe, and to the clonic and tonic of Liepmann.

In hysteria the disorders of motility, which are of psychic origin, convulsions, chorea, myoclonus and tremor are all kinetic manifestations. Catalepsy is a very good example of static involvement. In dementia præcox the stereotyped movements so common in catatonic patients are kinetic in origin, and the stereotyped attitudes which may persist for months and years are static in origin. psychic sphere the psychic representation of the kinetic system is thinking, of the static system, belief. The object of thought is the attainment of belief in response to the stimulus of doubt. The counterpart of loss of power in the motor sphere is paralysis of thought, with consequent loss of judgment and the reasoning The counterpart of increased activity of the motor faculties. sphere is seen in the flight of ideas of the manic state. This in the realm of thought is the analogue of the hyperkinesis of the motor sphere. The so-called crowding of thought in schizophrenia is also a manifestation of excessive discharge in the thinking mechanism. In the static component of mind we find in the compulsion neuroses an inability to fix the processes of thought in a decision. The fixed delusion is an instance of disorder of the static representation of G. W. T. H. FLEMING. thought.

M. Coue's Theory and Practice of Auto-suggestion. (Brit. Journ. of Med. Psychol., December, 1923.) Moxon, C.

Moxon points out that Coué's method only attacks symptoms and pre-conscious outcroppings, and ignores the unconscious source of neurotic symptoms. In Coué's auto-suggestion, hetero-suggestion plays an essential part, for both in clinics and books the personality of Coué is very much to the fore. To the ignorant he is the magician working miracles of healing. There is a very obvious transference of libido to a parent-substitute. The technique tends to revive the infantile use of magic words and gestures with a large increase in the expression of narcissistic libido. The author maintains that auto-suggestion cannot be recommended as the best aid to health if it is either of the repressive kind or of the expressive kind when it is used (a) to weaken the reality principle, (b) to promote regression to infantile narcissism, (c) to replace the search for the hidden cause of ill-health by an ignorant removal of pain and incapacity, and (d) to encourage the delusion of omnipotence, for which such words as "difficult," "impossible," "I cannot," etc., will disappear. It is equally unsatisfactory as a method of dealing with moral delinquencies in ignorance of the unconscious impulses expressed therein. Induced auto-suggestion can be most safely used (a) for the removal of the slight neurotic symptoms that occur in approximately normal persons under exceptional conditions of strain, (b) for the involutionary cases that preserve the relics of a bygone conflict by the habit of repetition, and (c) for unanalysable persons. It is well to bear in mind that immunity to psychical suggestion and physical infection from without depends on the removal of the unconscious causes of inefficiency within.

G. W. T. H. FLEMING.

Psycho-analytic Views on Characteristics of Early Infantile Thinking. (Brit. Journ. of Med. Psychol., December, 1923.) Abraham, K.

We find that in early childhood, thinking is in a special degree under the influence of instinctive life. In the earliest days of our life contact with the outer world is made entirely by means of the mouth, hence its importance in later life from a psycho-analytic viewpoint. The child conveys everything to its mouth, and so expresses a wish to incorporate everything in itself. The child is purely egoistic, its attitude towards external objects being a simple matter of pleasure or pain. Side by side with this we find that when two objects arouse in the child similar feelings of pleasure or pain, he proceeds unhesitatingly to identify them. A similar mechanism is seen in the thinking of primitive races, and persists in the symbolic mode of expression seen in myths and fairy tales. The infant develops a feeling of omnipotence, and only gradually as he grows up does his critical faculty teach him the bounds of his power. These ideas of omnipotence become displaced on to some being who is endowed with peculiar authority (father, God). Thinking in early childhood is often in the realm of phantasy, and is therefore a great source of pleasure. As the child grows up,

logical thinking gradually takes the place of phantasy. In the development of both the individual and the race, the instincts are earlier than thoughts.

G. W. T. H. Fleming.

The Nature of Auto-suggestion. (Brit. Journ. of Med. Psychol., August, 1923.) Jones, E.

The idea of auto-suggestion in the first place caters to the universal idea of free-will, and flatters the narcissistic sense of omnipotence by the incantation of magic verbal formulæ. In the second place. it delivers the patient from the sexual transference which has been shown to underlie hetero-suggestion. The most important processes comprising suggestion may be grouped under three headings. First, there is the emotional rapport between the subject and the operator—the "affective suggestion" of the author. This stage is a foundation for the later stages. Second, there is the acceptance of the idea suggested—the "verbal suggestion" of the author. Third, there is the ultimate effect realized by the idea after it has been incorporated in the personality. The characteristic of suggestion is the free development of the effects of communicated ideas, the forces usually hindering this development being neutralized by the presence of the rapport. This rapport is of an emotional nature, and according to psycho-analysts is sexual in nature, and is due to the re-animation of an infantile attachment to a parent.

The two schools of thought differ in the opinion as to how the rapport operates. According to one, the main thing is the influence of the operator; according to the other, the main thing is the subject's peculiar attitude towards the operator. The psychoanalysts belong to the latter school. It is very difficult to draw any sharp line between hetero-suggestion and auto-suggestion. The two conditions differ in respect of the idea on which concentration has taken place. With hetero-suggestion it is the father (or mother) imago, with auto-suggestion it would appear to be the actual self.

According to Jones, suggestion is essentially a libidinal process; through the unification of the various forms and derivatives of narcissism, the criticizing faculty of the ego-ideal is suspended, so that the ego-syntonic ideas are able to follow unchecked the pleasurepain principle in accordance with the primitive belief in the omnipotence of thought. Such ideas may either develop to their logical goal (beliefs, judgments) or regress to their sensorial elements (hallucinatory gratification). The essential part of the unification in question is that between the real ego and the ego-ideal. condition under which it takes place is that the repressed alloerotic impulses are to be renounced. This is made possible by regression of their libido in the direction of auto-erotism, which results in a further reinforcement of the narcissism. If the primary narcissism has been released and re-animated directly, by concentration, upon the idea of self, the process may be termed "auto-suggestion"; if it has been preceded by a stage in which the ego-ideal is resolved into the earlier father ideal, the process may be termed "hetero-suggestion."

The drawback to any form of suggestion is that what peace of mind it gives is purchased at the expense of an important part of the personality being impeded in development with consequent loss of stability; the allo-erotism that should progress to object-love, altruism and the various sublimations of life regress towards autoerotism with all its stultifying potentialities. In psycho-analysis the aim is to effect tolerance, if not reconciliation between the ego-ideal and the repressed allo-erotism. The aim of the hypnotist and the analyst are diametrically opposed. The former seeks to strengthen the patient's narcissism, the latter to divert it into more developed forms of mental activity. In concluding, the author draws attention to the fact that auto-erotism and allo-erotism correspond to infantilism and adult life, to introversion and extroversion, and even to the Eastern and Western methods of dealing with life. G. W. T. H. FLEMING.

The Reality Feeling in Phantasies of the Insane. (Brit. Journ. of Med. Psychol., April, 1923.) Devine, H.

The author, after describing the delusional system of a male patient of 38 with the familiar foster-parent phantasy, proceeds to examine explanatory theories. He dismisses as inadequate the older theory of megalomania being secondary to delusions of persecution—the "retrospective explanatory insanity." Insane delusions are not developed by reasoning and deduction, but are forced upon the patient. The insane differ entirely from psychoneurotics and children in their attitude towards phantasies. In the neurotic and in children the phantasy is known to be imaginary; in the insane it is believed to be real. In these cases the patient is not retreating from reality. The images are non-volitional in character, they well up, and the patient is quite powerless to prevent them. The development of a delusion is similar to the birth of an instinct—there is a sense of tension and anxiety. Delusions of the insane always reveal the working of unmoral primitive instincts. In this case the patient's delusions expressed in primitive form the abstract notions of omnipotence, egotism and self-love. The development of a delusion often leads to a cessation of tension and a feeling of peace. The paranoic's delusions are real to him because they express a real instinctive need, a necessity for which his whole organism craves. The delusion is a symbol of an abnormality which actually exists, and indicates what is wrong with the patient. To the paraphrenic and paranoic their beliefs are true, and it is to this fact largely that community life in an asylum so often agrees with these people. They feel themselves no longer in a hostile environment, but in one where public opinion regards their abnormal beliefs and behaviour as normal. G. W. T. H. FLEMING.

Photographed Lilliputian Hallucinations. (Journ. of Nerv. and Ment. Dis., August, 1925.) Conklin, E. S.

A man whom Conklin never actually met, but corresponded with, supplied him with details of his lilliputian hallucinations, and sent

him what purported to be photographs of the tiny people. In addition to visual and auditory hallucinations, the man had cutaneous hallucinations, for he felt the tiny people touch him, comb his hair, etc. The prints showed on examination little except slight stains on the films. The "photos" he saw were the perceptive illusions of the expectant variety. This man after he closed his eyes had "mystifying shadows" and gradual appearance of rapidly moving images. Idio-retinal light was obviously the beginning of the process. Later the hallucinations were projected into the visual field with the eyes wide open. Salomon explains the diminutive size of the figures as follows: Imagination takes place with a setting appropriate to the central figures of the imaginative content; if then this is projected from an imaginal setting into a sensory one, the magnitude of the imaged figures may be out of pro-According to this theory the figures may be of any size. The negative visual after-image of course varies with the distance of the field of projection. Conklin then says that if, instead of a visual after-image, we substitute a visual perception well developed round some relatively obscure visual process, such as the idioretinal light, then the projection might not be influenced by the proportions of the field into which it was projected. This is supported by Miles, who found that the nature of the projected image depends on the attention directed on it. According to Koffka, the child's first experiences of figures and ground are evidently of different magnitudes according to the distance at different times. Constancy of magnitude is a gradual acquisition. Conklin thinks that in lilliputian hallucinations there is a reversion to some stage in which the constancy of magnitude was yet imperfect. The break-up of the synthesis producing constancy of magnitude permits the recurrence of images of diminutive magnitude from experiences prior to the development of the constancy of magnitude.

G. W. T. H. FLEMING.

#### 3. Treatment.

Bismuth Treatment of Cerebro-spinal Syphilis. (Journ. of Nerv. and Ment. Dis., August, 1925.) Smith, W. A., and Foster, L. J.

The authors used a preparation of metallic bismuth suspended in oil, such that each c.c. contained 10 cgrm. of bismuth. The dosage given was 2 c.c. deep into the buttocks, two or three times weekly. A series of 12 injections was given, followed by a rest of 2 months. Most cases were given a total of 24 injections. Bismuth appears to be much less toxic on the viscera than arsenic. There were no cases of generalized reaction. The mode of action is variously stated to be trypanocidal, to be due to the phagocytosis induced, or to be due to the activation of a specific tissue substance which is trypanocidal. Pains, numbness, paræsthesias, dizziness, headaches and urinary disorders were relieved in cases of cerebro-spinal syphilis. A case of luetic meningitis showed rapid recovery, with no return of symptoms of nervous system involvement eleven months

later. One case of spastic paraplegia was unchanged; the other cases showed greatly diminished spasticity, especially manifest in the gait. Five cases presenting hysterical symptoms with no signs of organic disease of the central nervous system, but with a positive blood Wassermann, obtained marked relief from symptoms. two cases of paralysis agitans with positive blood Wassermanns, and pupils which were sluggish to light, the tremor was improved in one case and unchanged in the other. The use of bismuth did not reduce the Wassermann of either the blood or fluid in cases of neuro-syphilis. The authors consider that this is not a necessary objective, and that treatment should be guided by the clinical symptoms and not directed toward a negative serology. The objective signs of neurosyphilis were also not materially affected. believe that bismuth is of real value in the treatment of neurosyphilis. It is especially valuable for subjective symptoms. Two cases of multiple sclerosis were treated with bismuth without relief.

G. W. T. H. FLEMING.

- 1. The Relation of Education to Mental Disorders. (Occupat. Ther. and Rehabil., October, 1925.) Saunders, M. J.
- 2. Bringing the World of Nature to the Mental Defective. (Ibid.) Wilson, Flora B.
- 3. Motivation of Social Interest. (Ibid.) Kelleher, J. P.
- 4. Occupational Treatment in Mental Hospitals. (Ibid.) Humphrey, E. P.

The author of the first paper gives a detailed account of the methods employed and the results obtained during a period of sixteen months spent whilst working with her patients, the majority of whom were cases of dementia præcox, both hebephrenic and catatonic types being observed. The system comprised a quickening up of the motor system by ball games, skipping, etc., and a stimulation of the mental powers by reading, dancing, singing, picnics, The introduction of the competitive spirit proved a potent auxiliary, and discipline was enforced, exclusion from the group being very effective as a punishment. The notes on individual cases show the rapid improvement made once the inhibitions were broken or breached, and the author considers that along this line of attack there is a good prospect of success. She believes that the patients are far more cognizant of their environment than is generally held, and therefore a stimulating atmosphere should be encouraged. Observations of the mental condition made in a laboratory atmosphere are often distorted by a surge of inhibitions. Marked improvement was obtained in most cases from the individual viewpoint, but the development of a more rational social entity was not so easily obtained.

The second paper enumerates the lines along which Nature knowledge was taught to mentally defective children. Flowers, birds and trees were studied, and, as subsidiaries, geography and similar subjects were introduced. Competitions proved a keen spur to the pursuit of their studies.

In the third paper progressive development along the lines of occupational therapy is urged, the co-operation of all, from the physician down, being regarded as essential, thus correlating occupational therapy with the other therapeutic measures. Investigation of each case will often suggest suitable lines for re-educative work, and will not try to force a square peg into a round hole. Suitable industrial education will help the patient later to become self-supporting should his condition improve, and so prevent him becoming an economic burden to the community.

Humphrey points out that in the dawn of civilization each community was self-supporting, the individual working not only for himself, but for the general good. As the mentally deficient patient fails to attain the present-day standards he is on a lower developmental plane, and should regard the institution as a colony, to which there is a definite contribution due from his own labours. His instinctive efforts to do his share should be helped by employing him on some productive work profitable to his own mental development as a unit of society, and to the institution which is his community. The economic burden on the State is lessened, and the comfort of his fellows is increased.

H. S. Townsend.

#### 4. Pathology and Bio-Chemistry.

The Estimation of Calcium in Blood, The Estimation of Phosphorus Compounds in Blood, and The Distribution of Phosphorus Compounds in Blood. (From the Chemical Laboratory, Cardiff City Mental Hospital; published in the Biochemical Journal, vol. xix, No. 4, 1925.) Stanford, Robert Viner, and Wheatley, Arnold Herbert Maurice.

In the first two of these papers the authors give the results of their experience with various methods of estimating calcium in the blood and phosphorus in the blood and cerebro-spinal fluid. They find that the methods hitherto employed are complicated and inaccurate, and they give details of improved methods which they have evolved, and which they claim to be fairly simple and at the same time accurate to within 5 %.

In the last paper are given the data obtained by applying their method of phosphorus estimation in a series of cases.

These papers should prove of great interest to those engaged in the difficult work of blood analysis.

W. MOODIE.

On the Occurrence of Abnormal Deposits of Iron in the Brain in Parkinsonism, with Special Reference to its Localization. (Journ. of Neur. and Psychopathol., November, 1924.) Lhermette, J.

Intracellular iron normally present in the globus pallidus was diminished in amount. In the substantia nigra it was present in normal amounts. Abnormal deposits of a siderophilic substance were found in each globus pallidus, in the form of globules; this substance was also found in vessel walls. The deposit was mainly

in the form of globules, while the vessels were much less affected. This distribution is unusual, and differs from that occasionally found in paralysis agitans and other conditions, in which the deposit is for the most part in the vessel walls. The present findings more closely resembled in this respect the deposits present in some cases of epidemic encephalitis. The chief chemical component of these deposits has been shown to be ferric salts. Fat has been found which, when uncombined with iron, cannot be considered abnormal. They were unable to prove the presence of calcium to their satisfaction. After removal of the iron component with oxalic acid, a substance which was insoluble in sulphuric and hydrochloric acids, which stained with hæmotoxylin but which did not give the characteristic reactions for calcium was left. They were unable to determine the chemical composition of this substance. Siderophilic deposit was only found in the oral half of the globus pallidus in its medial and more superior aspects. The tip of the oral part was not involved. In this connection it must not be forgotten that according to Spatz it is the oral half of the globus pallidus which normally contains most iron. There is no proof that these deposits play any part in the symptomatology of the disease. Similar deposits have been found in a variety of conditions, which as far as is known are unrelated to a disturbance of the globus pallidus. Cellular changes were present in a typical form in the globus pallidus, the cells being reduced to half their normal number. This finding is in accordance with Lhermette's previous experience in the pathology of paralysis agitans. A definite lesion was also present bilaterally in the substantia nigra.

G. W. T. H. FLEMING.

# The Cerebro-spinal Fluid in Tumours of the Brain. (Arch. of Neur. and Psychiat., July, 1925.) Spurling, R. G., and Maddock, C. L.

Lange, in 1921, showed in 60 cases a typical gold curve with colour changes in dilutions above 1/80, a moderate increase in the total protein, and almost invariably xanthochromia of the spinal fluid. Spurling and Maddock emphasize the fact that they found in the normal spinal fluid roughly four times as much protein as in the ventricular fluid. The picture presented by the spinal fluid in brain tumour is marked by a low cell-count, a high total protein value, averaging 250-300 mg. per 100 c.c., a characteristic gold curve (Type 3: 0000123100), and no variation in the sugar content. The changes in the ventricular fluid are in the same direction. In chronic arachnoiditis both spinal and ventricular fluids showed no deviation from the normal.

G. W. T. H. Fleming.

Electrical Conductivity of the Spinal Fluid. (Arch. of Neur. and Psychiat., August, 1925.) Eckel, J. L.

The conductivity of the spinal fluid depends on, and is the measure of, its ionized contents. The amount of albumen and globulin present has some retarding effect. In most of the abnormal conditions of the spinal fluid examined, the fluids compared closely

with the normal. Striking exceptions were found in cases with marked meningeal reactions, especially the tuberculous form of meningitis. This is explained by the low chloride content of the fluid in that condition.

G. W. T. H. Fleming.

The Mechanism of the Immunologic Changes in the Cerebro-spinal Fluid. (Arch. of Neur. and Psychiat., August, 1925.) Kolmer, K. A.

Antibodies commonly found in the blood cannot be detected in the normal fluid. Complement does not occur in normal fluid. Opsonins are usually absent, and diphtheria antitoxin in the blood in sufficient quantity to protect against the disease does not occur in the fluid. This latter fact is of little importance, since neither the diphtheria bacillus nor its toxin is capable of affecting the meninges, brain or cord. In connection with tetanus, the toxin of which has a special affinity for the spinal cord and possibly also those of bacillary dysentery and botulinus, although there are usually traces in the blood of natural antitoxin, there is absolutely no trace in the spinal fluid. In persons immunized with typhoid vaccine, and showing agglutinins in the serum in dilutions as high as 1:100, agglutinins and bacteriolysins are quite absent from the spinal fluid. As a consequence of this, when organisms are brought to the nervous system by the lymphatics there is no defence against them by the spinal fluid. In the case of arterial-borne organisms like Spirochæta pallida, the fluid can only be the means of spreading the organisms after they have penetrated to the fluid. According to the author the spinal fluid is formed in much the same way as the other fluids of the body—synovial fluid, etc. and like them, contains no antibodies. In disease, apart from syphilis, acquired antibodies do not enter the fluid unless there is some involvement of the meninges. In the sterile spinal fluid of human beings with acute meningeal congestion, erroneously described as "serous meningitis" or "meningismus," and developing during measles, alcoholism, pneumonia and whooping-cough, the author occasionally found natural anti-sheep-hæmolysins and traces of complement carried over as the result of acute vascular distur-In the author's opinion, the antibody-like substances responsible for complement-fixation in the Wassermann is identical with that causing the precipitation of lipoids in colloidal suspension in the Sachs-Georgi, Vernes, Kahn and other tests. Probably the same antibody is responsible for the precipitation of colloidal gold, mastic, etc., and is a reactionary product of the lymphocytes and fixed tissue-cells in direct contact with the antigenic substances elaborated by the Spirochæta pallida. Neisser calls this antibodylike substance "reagin." The amount of this present depends on the severity of the infection. The serum gives a positive Wassermann in neurosyphilis when the viscera are involved; if the viscera are not involved then the blood Wassermann may be negative, while the spinal fluid Wassermann is positive.

G. W. T. H. FLEMING.

#### 5. Sociology.

The Awkward Age. (Lancet, March, 1925.) Potts, W. A.

Dr. Potts discusses certain difficulties which are met with in the training of adolescents between the ages of 14 and 21 years. He points out the strong tendency, which all persons have, to attempt a return to that state in which all wants are supplied by the mother. And he sounds a warning against undue indulgence of this tendency in children by parents—an indulgence which is really most selfish, although often masquerading under the guise of supreme unselfish-Illustrative cases are quoted, which indicate the many evils which may result from imperfect development in this respect. All who deal with mal-adjusted adolescents know well how much trouble is caused by undue attachment to the mother. Dr. Potts's paper is not only a scientific contribution, but is also an attempt at advice to parents, and was delivered at a meeting of the Parents' National Educational Union. The paper admirably fulfils its intention. It has often been said that parenthood is the only profession for which no training is supposed to be required. And there is a lack of provision for the necessary training, even in the case of parents who desire instruction. We think that this paper might be most usefully expanded into a small book, which should aim at providing a not unduly technical guide to parents in the psychological training of their children. Perhaps Dr. Potts will consider this suggestion. Indeed, such a book might go further, and might point out the evil influence of undue dependence which is apparent in other departments of life. For life is, as Dr. Potts well says, a great and glorious adventure. Undue emphasis of the principle of "safety first" has many drawbacks.

M. HAMBLIN SMITH.

Incendiarism in Adult Males. (Lancet, June, 1925.) Young, H. T. P.

Dr. Young deals with this subject mainly in the light of his experience when a medical officer at Brixton Prison. period of three years 36 persons were received at that prison under a charge of arson. There are also 8 other cases included, making a total of 44. This number would be too small to justify any sweeping conclusions. But Dr. Young's findings amply confirm those of other workers as regards the high percentage of mental abnormality which occurs amongst persons who commit this kind of offence, and indicate the necessity of making careful psychological investigation in every case of this particular form of crime. In the present series there were 14 cases of mental disease, and 12 cases of mental deficiency or subnormality. Some illustrative case-histories are And Dr. Young provides an interesting discussion of the various motives which may actuate the crime of fire-raising. He points out that arson differs from other forms of malicious damage to property, in that arson rarely follows the alleged cause as rapidly as does malicious damage of other kinds. In the majority of arson cases it is possible to elicit the existence of some kind of plan. It is also noted that the diminution in the number of cases of arson has not been commensurate with the very great reduction in the consumption of alcohol, which dates from 1900. It is of interest to learn that an unrepealed statute attaches the death penalty to the crime of firing any ship in the Port of London, as well as to that of firing a King's ship or dockyard. It is somewhat curious that this particular port should have been so selected.

M. HAMBLIN SMITH.

A Review of Some Studies of Delinquents and Delinquency. (Arch. of Neur. and Psychiat., July, 1925.) Healy, W.

In a study of 4,000 cases of delinquency, 2,000 of which came from Boston and 2,000 from Chicago, seen during fifteen years, Healy found extraordinary dissimilarities between the two large cities.

In regard to physical conditions, he found that more boys show great over-development than under-development, and no less than 70% of the girls are above the age-weight norm. From a clinical standpoint one-third were in good physical condition; this is near the general run of young people. Sensory defects and diseased tonsils and adenoids are found in the proportions one would expect. In the Boston section only 8% had one or more carious teeth, in Chicago there were 53%. This difference is due to the Forsyth Dental Infirmary in Boston, which co-operates with the schools. There are a larger number of head injuries among delinquents than among non-delinquents 3.5% suffered from head injury. Stigmata of degeneration were found in 6%, and mostly in mental defectives. When examined for goitre, 10.4% of the Chicago girls and 1.1% of the boys showed it, and only .4% among Boston girls and none among the boys.

In considering the mental characteristics, he found that 70 % were normal mentally, 13.5 % were clearly feeble-minded, and 9 % were defective to some extent. Of the Chicago cases 5.6 % were psychotic, and only 1.1 % of the Boston ones. Epilepsy occurred in 5.5 % of cases in Chicago and 1.8 % in Boston, probably due to better care for epileptic children in Boston, fewer being at large in the community. There is a marked difference in the methods of handling offenders, through a much wider and wiser use of probation for older adolescents in Boston, and through much greater personal attention after parole from juvenile institutions.

G. W. T. H. FLEMING.

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Delinquency and Mental Defect. Symposium by East, W. Norwood, Burt, Cyril, Shrubsall, F. C., Stoddart, W. H. B. (Brit. Journ. of Med. Psychol., August, 1923.)

All four authors agree in regarding the moral aspect of delinquency as distinct from the intellectual problem. All recognize that delinquency is more than mere defective intelligence. The proposal is made to use in the case of high-grade special school

children the phrase "educationally defective" rather than mentally defective. The proportion of intellectually defective cases among the delinquent population is far lower than earlier investigators found, and nearer 5 % than 50 %. All four agree that morality is not inborn, but is acquired; hence, as there is no inborn moral sense, there can be no inborn moral defect. The real innate basis of most juvenile delinquency is to be found in the primitive instincts. There is an important group of cases where most of these instincts and their corresponding emotions are inherited in an excessive Of special importance is the presence of general emotional In a small proportion of cases excessive emotional instability. instability may be found without intellectual retardation. All are agreed that the diagnosis of deficiency on other than inadequate intelligence is only to be made with great rarity and care. moral imbecile or moral defective corresponds to what Burt describes as a "temperamental defective," or one who "without being defective also in intelligence, exhibits, permanently and from birth or an early age, less emotional control than would be exhibited by an average child of half his chronological age, or in the case of an adult, of the age of seven or less." G. W. T. H. Fleming.

# 6. Mental Hospital Reports.

Down District Asylum.—During the year 1924, 105 patients were admitted, which, with those remaining on December 31, 1923, brings the total number under treatment to 821. The discharges were 59 and the deaths 42, leaving 720 who remained on December 31, 1924. The accommodation provided will permit 800 patients to be treated, so that 80 vacancies occurred at the end of the year.

Of the 105 admissions, 25 % were of a maniacal nature, 40 % melancholic, and 20 % were delusional. The remaining 15 % covered those suffering from general paralysis, dementia, epilepsy, etc.

The recovery-rate was 52.4 %, compared with 50 % for the preceding year. The report, however, points out that in 1923, 24 cases were admitted at ages ranging from 65 to 85, whereas in 1924 only 9 of such were admitted. The total annual average cost works out at £58 10s. 5d. per patient—an increase of £1 15s. compared with the previous year.

As a valuable adjunct to the medical treatment there is mentioned the appointment of a surgeon-dentist who has treated some 264 patients, and a great improvement followed in the general health of the patients thus treated.

Two sets of a wireless installation have been provided by the residents of the district under the auspices of the Ulster Gala Sports Committee. As a general rule, little or no notice is taken of the mentally sick by the public except on a question of illegal detention, so any little evidence of interest in another direction is to be welcomed.

Lastly there is mentioned a visit of note from members of the Association on the occasion of Dr. Nolan's presidency. Many of us will long remember with pleasure the social side of that visit during the summer of 1924.

Maudsley Hospital.—This report is for the year 1923, and is the first issued from this institution, owing to the numerous difficulties that have occurred during the fifteen years that have elapsed since Dr. Maudsley made his magnificent offer. As Dr. Mapother points out, the Hospital was originally intended for recent recoverable cases of certified mental disease, but now, owing to the wise provisions of the London County Council Act, 1915, deals with voluntary patients; thus London County has been the first to remedy a defect in the Lunacy Act, 1890, which has been for many years not only detrimental and unfair to the poorer class of patient, but representative of a type of legislation which all must deplore.

The conditions of admission to the Hospital, it is noted, are on broad lines, and wisely leave a good deal to the discretion of the Medical Superintendent, though it may be thought by many that the entire and compulsory exclusion of any certified case, might,

at some time, prove to be an undesirable limitation.

The chief purposes of the Hospital are research, educational, consultative, and treatment, and Dr. Mapother reports in some detail under each of these headings, though much of the research work is published in extenso elsewhere. Excellent and valuable work is recorded in the report, and of particular interest is a case of bronzed diabetes with mental confusion treated with success with insulin, and the trial of tryparsamide (supplied by the Rockefeller Institute, New York, through Sir Frederick Mott) as an antisyphilitic remedy, of which we have heard such glowing accounts from America.

The consultant specialists to the Hospital are Mr. Wakeley (surgeon), Mr. Gilliat (gynæcology), Mr. Jenkins (ear, nose and throat), Mr. Foster Moore (ophthalmic), Mr. Read (dentist).

"The first three named are on the staff of King's College Hospital, and it has therefore been possible to arrange that our patients shall be seen and treated in the out-patient departments or wards of either hospital, as necessary. In this and in other ways the association with King's has been of enormous advantage, e.g., several members of the staff in special departments, though holding no appointment here, have given opinions on cases referred to them."

Thus Dr. Mapother seems to have reached the ideal relationship between general and special hospitals, for which we have all been hoping, but frequently found so difficult of attainment owing entirely to the tyranny imposed by geographical position. It is to be hoped that the lesson taught by Maudsley Hospital on this point will be borne in mind by any future builders of mental hospitals.

Dr. Mapother's report as to results of treatment are wise, cautious, and show the sound scientific spirit.

"Of cases discharged with approval, 86 (35 %) were recovered, 87 (35 %) improved, and 75 (30 %) not improved.

- "These statistics without reference to diagnosis are of relatively little value, and they need considerable commentary.
- "A very high standard has been maintained in the use of the word 'recovered' so far as the actual state of the patient is concerned. It is used, however, here, as elsewhere, in respect of the attack and in no prophetic sense. It is at present impossible to distinguish with any certainty those cases which are unlikely to relapse.
- "The discharge of patients as 'improved' who are likely to complete their recovery at home, possibly while continuing to attend the out-patient department, has been deliberately adopted as a policy, so that many appearing as 'improved' might be credited as ultimate recoveries.

"As in the case of out-patients, the group appearing in the first report as still under treatment probably contains an undue proportion of those who will ultimately be discharged as recovered or improved, but have not yet had sufficient time.

"All comparison of these results with those of mental hospitals is to be deprecated. Variations in the results of mental hospitals receiving unselected and similar admissions correspond rather to differences in the mentality of medical superintendents than of the patients. Here, where admission is selective, if the supply of patients were unlimited and the aim a single one, viz., treatment to recovery of the maximum number, then results would indicate chiefly the capacity of the medical staff for prognosis.

"During the early months, while there were numerous empty beds, selection was probably less stringent than it will be now that there is generally a waiting list; results will seem to improve. But the aim is not a single one, and many cases of bad prognosis are admitted for their value in relation to teaching or research, or for the trial of some new treatment, e.g., general paralytics. Most of the cases grouped as dementia præcox indicate the difficulty of prognosis in the initial stages of this condition, the diagnosis having been reluctantly reached after observation in cases which at first seemed of another and more hopeful type.

"On the whole the cases of neuroses, as the tables show, are hopeful, but this is by no means universal. Careful selection of cases is still necessary to obtain favourable statistics as to the result of any kind of treatment in any form of neurosis. The cases of hysteria now sent here are usually of a far more difficult type than those one usually saw during the war; they have usually already been long treated without success. The need to limit the admission of some types of cases—e.g., acute mania, and the tendency of those admitted to require discharge before recovery either at their own request or for the sake of others—robs this Hospital of a certain number of cases of a type treated with success at mental hospitals.

"Several of these points have to be remembered in considering the following table showing the results in cases of psychosis at this hospital which might otherwise be considered readily comparable with those of mental hospitals, and so bearing on possible legislation. Under the term 'psychosis' here are included all those cases which in the opinion of my two senior colleagues, checked by my own, were of types familiar to us at mental hospitals, which in fact at some stage of the present attack (before or during treatment here or on leaving) might have been certified if adequate treatment had not been available here or elsewhere without certification."

Apart from the pathological laboratory under the guidance of Dr. Golla, the medical staff of the Hospital is a strong one, consisting of a medical superintendent and four whole-time medical officers, four whole-time clinical assistants from the London County Mental Hospitals (three-month appointments), and a varying number of voluntary clinical assistants (usually about six), acting on two or three mornings or afternoons per week. As the patients are about 150 in number it is obvious that the intensive work possible in individual cases is very great, and yet Dr. Mapother has to record that even with this assistance, the work of the regular medical officers remains extremely heavy.

The whole report is full of interest, instinct with the true spirit of great and high ideals, worthy of the name of the great man that the hospital bears, and of it, it may be said (with Horace) that it is truly a "monumentum aere perennius, regalique situ pyramidum altius."

The Kent County Mental Hospitals: (1) Barming Heath.—Dr. Wolseley-Lewis opens his report with a reference to the interest at present shown by the public in mental affairs, and in a sentence, well indicates the attitude that all medical superintendents have towards it:

"The public and the daily press continue to take an active interest in the treatment of the insane, and a Royal Commission is now sitting to inquire into the Lunacy Laws and to make recommendations. We welcome an investigation into the existing conditions, hoping that thereby our difficulties may be more generally appreciated, and our aspirations get a better chance of being realized."

from which it is to be understood that those who have had the responsibility of treating all kinds of mental disease have never been satisfied with the conditions under which they have to work, but have had to put up with them faute de mieux in order to satisfy the tyrannous demands of the myopic ratepayer for a low-figure maintenance rate at all costs.

The admission-rate for the year was rather less than the usual, namely 354 (M. 122, F. 232), but overcrowding was present during the whole of the year, which terminated with an excess of 62 over the statutory accommodation figure.

The recovery-rate was 39.6%, and the death-rate 5.6%—the lowest ever recorded by this institution—and it is noteworthy that a similar low death-rate has been recorded in several mental hospitals during the year under review.

An interesting innovation in the form of an occupation officer has been introduced by Dr. Wolseley-Lewis, who reports that the department is now fully organized, and forms a valuable unit in the therapeutic armamentarium of the Hospital.

"The Occupation Officer has now organized his department. As soon as a patient is considered fit, the medical officer in charge notifies the Occupation Officer, and it is his duty to interview the patient and find him employment suitable to his mental and bodily health.

"Three classes are recognized: (1) Those able to work by themselves, (2) those able to work only in parties, (3) those requiring individual attention. Classes 1 and 2 have always existed to some extent; Class 3 needs better development. For this experience, tact, initiative, and perseverance are required. It is advisable that the range of occupations should be as wide as possible to meet the needs of particular cases. We have taught basket-making, and will soon make a start on other simple trades."

Dr. Wolseley-Lewis gives as an addendum to his report a useful résumé of the last five years of the Hospital, from which it is seen that the average admission-rate was 367, average recovery-rate 35%, and the death-rate 7%, while 63% of the admissions had been ill for more than a month prior to admission, and in 5.4% of the cases alcohol "was considered to be an exciting factor."

(2) Chartham.—In this institution there is also overcrowding, which Dr. Abdy Collins suggests might be relieved to some extent by the provision of accommodation for senile cases of a suitable type in the local infirmaries, and still better by the provision in loco of special hospital accommodation for recent and acute cases.

Concerning treatment, Dr. Collins reports as follows:

"We have been able to continue the treatment of general paralysis by malarial infection. One case has been well enough to be discharged, and several others have been greatly benefited, but it is still early to say what can be hoped for finally in dealing with this disease. To get the best results the treatment should be begun very early, and cases are not generally sent for treatment soon enough."

The admissions for the year were equal for each sex, and rather less (244) than those of the previous year. The recovery-rate was 30.7 %, and the death-rate 7 %, the former being about the same as that of the previous year, and the latter the lowest for 35 years.

Dr. Collins has, like many others, to complain of the perennial and universal difficulty in maintaining an adequate female staff, and considering that a portion at least of this difficulty may be due to want of accommodation, records with some satisfaction the fact that the Committee are taking steps to provide it.

Of the admissions for the year it is to be noted that nearly half were congenital defect, epilepsy, general paralysis, other gross brain lesions, dementia præcox, or some form of dementia, and alcohol was regarded as a principal ætiological factor in only three cases, all female. The only noteworthy cause of death was one case due to pellagra.

Dr. Collins refers to the valuable services rendered to his hospital by the Mental After-Care Association, which has successfully helped many of his convalescent cases to tide over that difficult period

following discharge.

Dorset County Mental Hospital.—This institution ended the year with the same number of male patients as on December 31, 1923, but with an increase of 15 in the number of female patients, leaving little vacant accommodation for female patients in the main building.

Dr. Peachell gives an interesting summary showing the prospects

of possible recoveries and their subsequent history thus:

Total admissions during 1924			174
Of admissions considered recoverable			63
Possibly recoverable cases remaining u	nder tr	eat-	
ment 1.1.24			51
Total number of possibly recoverable of	ases un	ıder	
treatment during 1924			114
Of whom had recovered by 31.12.24			68
Recoverable cases transferred, etc			2
Recoverable cases died			I
Recoverable cases remaining under	treatm	nent	
31.12.24			43

The percentage-rate of recovery to total possible recoverable cases was thus 59.64. The actual recovery-rate calculated on the direct admissions was 43%.

A large number of admissions were of the senile type, many of whom Dr. Peachell, in agreement with many other medical superintendents, considers might be suitably dealt with in a properly staffed and equipped workhouse infirmary.

As to the type of mental disease amongst the admissions, confusional insanity, recent melancholia and non-systematized delusional insanity take the lead, primary dementia only occurring in two cases, one of either sex. Heredity is given as an ætiological factor in 50 cases, and alcohol as a principal factor in 13 cases, which Dr. Peachell notes is a figure showing considerable increase over that of the previous year. The death-rate for the year was 7.4%.

The pathological laboratory, to which has been added further equipment, has done valuable work during the year—not only in the form of a great deal of routine examination, but in continuing the investigation that is in progress, as to the urea content of the blood in epilepsy.

The out-patient clinic, which has been successfully established here by arrangement with the County General Hospital, has done good work during the year: 58 new cases attended during the fifteen months under review, and Dr. Bedford, who acts as Hon. Physician to the Clinic, reports as follows:

"In addition to these a number of patients discharged from the mental hospital report themselves from time to time for advice or treatment as required. This I consider a very useful function of the Clinic, for a certain amount of stress is experienced by those who have to face the world again after their breakdown.

"Only 12 persons of those attending had ultimately to be certified and admitted to the mental hospital, and of these, 5 have since been discharged as recovered. The remainder are unfortunately suffering from forms of mental disease in which

the prospects of recovery are not good.

"The commonest type of mental disorder seen at the Clinic continues to be an anxiety neurosis, often associated with depression. It is sometimes found that the patient's home surroundings for one reason or another are militating against his chances of recovery, and these are the cases that soon improve when removed from their unsuitable environment by certification.

"A few cases are sent for consultation and are not seen again, whilst others, such as feeble-minded children, are not suitable for out-patient treatment.

"A certain number of persons suffering from epilepsy come to the clinic as a last resort, and even some of these have undoubtedly been benefited.

"If the grants given by the Boards of Guardians of the county are renewed, the Clinic will just be able to pay its way. I earnestly hope they will continue to give it their financial support."

The Salop County Mental Hospital.—This was formerly the mental hospital for the two counties of Salop and Montgomery, and it is interesting to note that since the dissolution with the latter county in 1912, the total population of this institution has only increased by 6 patients during the succeeding fourteen years. Dr. Hughes has not to complain at present of overcrowding, and is able to maintain 78 private patients, but for obvious reasons is making definite efforts to secure the transfer of juvenile patients of the mental deficiency class to their proper institutions.

There were 165 admissions during the year 1924, of whom 124 were first-attack cases. The recovery-rate was  $37\cdot2\%$ , and the death-rate was  $10\cdot5\%$ . No tables are shown from which details concerning these may be gathered, but from Dr. Hughes's summary it is shown that pneumonia was the cause in  $13\cdot6\%$  of these deaths.

The weekly cost of maintenance was 16s.  $10\frac{1}{2}d$ . and the charge to the Guardians during the whole year 14s. 7d.—a discrepancy which has resulted in a considerable reduction in the maintenance account balance.

Dr. Hughes deplores the apathy of the staff with regard to training and preparation for the Royal Medico-Psychological examinations, since only two candidates of either sex presented themselves at the recent examinations.

Wilts County Mental Hospital.—This institution ended the year with 59 patients more than it began with. This included 35 patients received under contract with Middlesex county—a figure later increased to 70. The admissions for the year were actually one less (excluding contract cases) than in the previous year. The admissions included 11 cases of general paralysis, and alcohol, was regarded as an ætiological factor in  $6\cdot1\%$  of the cases. The ratio of recoveries to the direct admissions was  $21\cdot5\%$ , and 44% of these were a first attack of insanity of less than three months' duration. The majority of those recovered had a probationary period on trial with a money allowance.

The death-rate for the year was 7·1%, while senility, tuberculosis and arterio-sclerosis show the largest figures amongst the causes of death.

Dr. Cole publishes an interesting table showing the total number admitted during the year and from the opening of the asylum, which would be much more interesting if the basal populations also were shown, and from this there appears to be a tendency to an increase of admission-rate from the more densely populated unions.

It is proposed to utilize the new detached annexe, which is designed for 100 patients of each sex, as a reception hospital—a suggestion which meets with the approval of the Board of Control.

Brighton City and County Mental Hospital.—There were on the registers on December 31, 1924, a total of 821 patients (M. 304, F. 517), and during the year there were admitted 199 cases (M. 81, F. 118). The recovery-rate on the total admissions was 28%, and the percentage of deaths on the average number resident was 9.5%.

A considerable number of patients are resident under contract from Eastbourne and Middlesex; there are however, only a few vacant beds on the female side, taking the normal accommodation as 513.

Dr. Harper Smith gives parole to as many patients as in his judgment is wise:

"Parole has been introduced, and there are at present 7 male patients and 17 female patients on full parole, and 46 male patients on parole within the grounds.

The male parole patients are in a ward apart from the other patients, and have open doors between the hours of 9 a.m. and 9 p.m. The hours of parole for male and female patients are: In the summer, 9 a.m. to 9 p.m., and 9 a.m. to 6 p.m. in the winter. Special permission is always given for evening church and entertainments outside. On the female side four wards have open doors, throughout the year, into the gardens."

Herts County Mental Hospital.—This hospital was opened in 1898 on the partial dissolution in partnership of the old "Three Counties," and Dr. Norman Boycott became the first medical superintendent, and has remained so from that date to this, giving to the institution initiative, ability and energy, which is reflected in every part of the hospital. The committee in their report gladly recognize this, and in receiving his resignation place on record the loss which will be felt by themselves and the institution when his resignation becomes effective; they also recommend a resolution to that effect to the County Council, accompanied by the hope that he may be spared many years "to enjoy the comparative rest for which his labours have made him so fully entitled," and we are sure that all members of this Association will unite in this wish to one who has always been such an active, useful and devoted member.

The number of admissions during the year were 160, of whom 151 were first admissions and 93 first-attack cases. The chief forms of mental disorder in the admissions were—recent melancholia, recurrent melancholia, recent mania and confusional insanity; only 6 cases of primary dementia occurred amongst the first-attack cases.

In the ætiology of these cases, heredity, senility, prolonged mental stress take the leading place, alcohol being regarded as a principal cause in 10 cases only.

The recovery-rate for the year on the direct admissions was 33.8% and the death-rate 5.9%.

The Staffordshire County Mental Hospitals: (1) Stafford.—Here, as elsewhere, overcrowding is the insistent note which calls for remedy, there being an excess population on the female side of 45 over the normal accommodation of the hospital, but even under these conditions Dr. Shaw is able to report a very satisfactorily low record of both pulmonary tuberculosis and colitis:

"The mortality from pulmonary tuberculosis is gratifyingly low this year, and must be attributed to the unremitting attention which has been given to ward hygiene, and to the generally improved diet. How far the addition of Marmite is responsible it is impossible to say, but that it must have been beneficial is undoubted—it was given with the idea of supplying vitamines, as the diet generally was considered to be lacking in these substances. This was, I believe, the first hospital to introduce it into its dietary, and it is now in use in many similar institutions."

The relative immunity from colitis is attributed to stringent measures of cleanliness, formaldehyde disinfection, and the introduction of the vacuum system of dust removal, which has been installed in two wards on each side of the hospital. This is believed to be the first time this principle has been adopted in a county mental

The ordinary statistical tables of the Association are not published, but Dr. Shaw gives the following analysis of the direct admissions:

		М.	F.
Congenital defect present .		5	7
Recurrences and readmissions		15	35
First-attack cases		55	86

A further analysis of these as regards ætiological factors is given in the following table:

# First-attack cases:

(1)	Mental breakdown due to or			
	associated with—	М.		F.
	(a) Cardio-vascular degeneration	3		7
	(b) General paralysis	6		I
	(c) Epilepsy	9		7
(2)	Mental breakdown due to various			
	other causes	37	_	7 I

Of the previous admissions, I was epileptic, 2 syphilitic, and 7 suffered from cardio-vascular degeneration.

Possible recovery could be hoped for from 108 (37 men and 71 women) of the 141 first-attack cases—that is, of the men 67.2%, and of the women 82%.

The recovery-rate for the year was 29.3% in the case of the men and 37.6 in the case of the women, and the maximum recovery-rate was in the men's case at the age-period 35-44, and in that of the women, 25-34. In 60% of the recoveries the duration of attack prior to admission was less than two weeks.

The death-rate was 6.3% of the total cases under treatment for the year (1924), and the chief causes of death were general paralysis

22%, and cardio-vascular degeneration 33%.

Considerable and valuable work has emanated from the pathological laboratory, on toxic products in the intestines, the blood-sugar curve in different forms of insanity, and the condition of the endocrine glands in mental disease, besides a great deal of routine work, and in addition the laboratory has afforded help to the Stafford Infirmary and local practitioners in the pathological investigation of certain cases—a very satisfactory *liaison* between the general hospital and practitioner and the special hospital and medical officer.

Approximately 14% of the male and 9% of the female nurses hold the final certificate of the Royal Medico-Psychological Association.

(2) Burntwood.—After over 45 years' residence at this hospital, of which period as much as 43½ years were spent as Medical Superintendent, Dr. J. Beveridge Spence retired on April 30, 1924, and both Visiting Committee and Board of Control readily recognize and place on record the valuable and distinguished service which he has at all times rendered to this hospital over this long period;

and our Association, of which he has been for many years an active, energetic and devoted member, will readily join them in wishing him many years of ease and leisure in his retirement.

Dr. Reid, who had acted as Deputy Medical Superintendent for many years, succeeds Dr. Beveridge Spence, and the report for the year 1924 is his. The normal population for which accommodation is provided is 422 males and 482 females, and at the end of the year there were 11 in excess on the male side and 8 vacant beds on the female side. In spite, however, of the crowded state of the hospital, pulmonary tuberculosis and dysentery cases are comparatively few in number.

The admissions for the year were 201 (M. 101, F. 100), the recoveryrate 38.7% and the death-rate 7.9%, which is lower than usual.

A good deal of routine work is carried out in the laboratory, and Dr. Cobb is, in addition, carrying out an investigation on the chemical aspects of epilepsy.

(3) Cheddleton.—At the end of the year 1924 there was in this hospital an excess in the number for which normal accommodation is provided of 39, and both the Committee and Dr. Menzies have grave things to say as to the necessity for the provision of the necessary accommodation and the methods to be adopted in doing so, the latter recommending that each mental hospital in the county should enlarge its accommodation by building its own acute hospital, thus giving a reception hospital to each of the densely populated areas associated with the existing hospitals of North, Midand South Staffordshire.

As to the causes of mental disorder Dr. Menzies says:

"The usual alleged causes recurred among the 1924 admissions, and need not be set forth at length. There is the gradual increase in the alcoholic cases, which has been in operation since the war, but the percentage has not yet reached prewar dimensions, probably on account of the high price of intoxicants. A good many senile cases have come in, and it is to be hoped that in any amendment of the law, provision will be made for the comfortable nursing of these old people in properly equipped wards in the Guardians' institutions without certification, although there will always be a proportion of seniles whose nursing is one of the most difficult problems of the mental hospital, and whose care will continue to tax all its resources."

Dr. Menzies has initiated in the Cheddleton Mental Hospital arrangements for orthopædic treatment, not only by means of a visiting operating surgeon, but also by a complete system of nursing under a supervising sister, by which means muscle re-education will be carried out fully. Arrangements have also been made with the National Association for Mental Welfare to send an organizer to instruct the nurses in the general training of mental defectives. This fine effort on behalf of the defective children is worthy of the highest commendation, and an example of the earnest and thorough way in which the work of this institution is carried out; in this department Dr. Menzies has the whole-hearted support and devotion of his senior assistant, Dr. Wilkins. Dr. Menzies is satisfied from his observations that the dread era of asylum dysentery is to all intents and purposes over:

"It is within a few days of 40 years since I first commenced the practice of mental disorders, and 1924 was the first year in which I did not encounter any case of dysentery. In my early days it was looked upon as a necessary evil among the insane, and the only protectives we knew were antiseptics and fumigation. The type was more severe than now seen, somewhat like that met with in the late war, and the case-mortality was quite high. When Cheddleton opened, transfers of infected cases took place, new strains of the Flexner bacillus were introduced, and, like other new asylums, we had a high disease rate. By continuous segregation, vaccine, protective sera, stringent ward fumigation and diagnosis of carriers by the agglutination test the number was gradually reduced, until all cases were gathered into one block on each side, and these people never went out of their ward except for outdoor work or amusement; they were excluded from dining hall, chapel services, entertainments, laundry and kitchen. Thus the spread was largely prevented, and as cases died off, they were not replaced. After the war compulsory notification was adopted by the Board of Control and improved dietaries were advocated, because it was noted that the staff of rate-aided hospitals and the patients and staff of private asylums, who had better food, were immune. Five years of amino-acids and vitamins have accomplished what no preventive medicine had previously done, and the disease is dying out among the insane. Of course further cases will occur for a few years because carriers will survive and a chill may cause a relapse, with some case-to-case spread. But as an administrative problem the disease will trouble us no more. It is the old story of the gaols over again, where an improved dietary was similarly successful, but we had no Medical Research Council in those days to co-ordinate observations and tabulate evidence, and so long as we were obsessed by the theory of calories we were blinded to facts. In old days I have known patients fed for 4d. per diem, and a public protest sent up when the maintenance rate was raised above 8s. 2d. per week. The present increase to an average of 26s. is in the main absorbed by two headings —the wages of the nursing staff and the food of the patients; the modern patient costs about 1s. a day to feed. This cost will rise in the future, both from the price of food-stuffs, and because the dietary is not yet up to the level to which the patient has been accustomed at home."

The improvement in diet that has occurred in all mental hospitals is undoubtedly all to the good, and it is hoped that the change will be reflected in all ways in the general well-being of patients; it is perhaps better illustrated in the diet-sheet than by a comparison of prices, unless full value be given to the index figure at each step.

The laboratory of this hospital is fully equipped, and is producing high-class work. Apart from a large amount of routine work, Dr. Stewart is carrying out special chemical and bacteriological research work in connection with the variations in intestinal organisms and their products in varying mental conditions as suggested by Dr. Menzies, with most interesting results.

After the recent somewhat extraordinary display in the *Times* as to the so-called "curative" influence of music, it is refreshing to read Dr. Menzies' sane and sound remarks, with which all serious thinkers must agree:

"The place filled by music in a mental hospital is therefore not specially curative, but rather becomes a very necessary entertainment and relaxation in lives otherwise pitifully divorced from the world outside."

Dr. Menzies has many wise things to say in this report as to the nursing question, and after some years of experience of Danish nurses, during which time they were undoubtedly a success, he comes reluctantly to the conclusion that they are now less satisfactory, not worth continuing, and to be replaced by nurses with general training who wish to gain a certificate in mental nursing.

St. Audry's Hospital, Melton, Suffolk.—The extremely difficult but undramatic task of taking over an old institution, reorganizing, remodelling, and in some cases almost rebuilding it, together with the work, requiring much patience and tenacity of purpose, of introducing new ideals, and re-educating a Committee, which falls to the lot of some, it is feared, is apt to go without its due meed of recognition; it is therefore with some satisfaction we note that both the Visiting Committee and the Board of Control give to Dr. Whitwell unstinting credit for his work of over a quarter of a century at this institution, and we are sure it is the desire of all members of the Association to echo the sentiments of the Board and wish him "many years of health in which to enjoy his well-earned leisure," and at the same time to wish to his successor, Dr. Brooks Keith, many years of good work.

The statutory capacity of this institution is for a population of 900 (M. 427, F. 473). Owing to overcrowding it has been necessary to board out, under contract, 40 female patients at Canterbury Mental Hospital, but even after adopting that expedient, there still remains at the end of the year 1924 a deficiency of accommodation to the extent of 25 males and 28 females. This has been temporarily met by the decision to build a detached nurses' home, which will set free some 50 beds for the use of patients; it is obvious, however, that in the near future further steps will be necessary to meet the requirements of the area.

The total number of cases admitted during the year (1924) was 200 (M. 97, F. 103), and of this number practically 15% were cases of primary dementia. The leading forms of mental disease other than this were recent mania and melancholia, and it is noticeable that no cases of general paralysis (of which, apart from the County Borough of Ipswich, the chief source in this county are the Newmarket and Lowestoft areas) were admitted during the year. Amongst the causes and associated factors of insanity among the direct admissions cardio-vascular degeneration gives the largest figure, and only one case is attributed to alcohol—how annoying this figure must be to those who persist in believing, in spite of all evidence to the contrary, that it is the use of alcohol in excess that "fills our asylums"!

The recovery-rate for the year was 8.38 (rather higher for the men than the women), from which we recognize that Dr. Brooks Keith holds a high standard in the use of the word "recovery."

Dr. Keith is to be congratulated upon having such a good proportion of his male nursing staff fully qualified with the Royal Medico-Psychological Association Certificate (44.6%), but the difficulties which seem almost inseparable from a female staff are in operation here as elsewhere.

Owing to numerous difficulties that have arisen during the year, the weekly cost has gone up from 21s. and a fraction, the previous year's figure, to 22s. and a fraction, so that the charge to the Unions has correspondingly increased from 18s. 1d. in the same quarter last year to 22s. 9d. in the March quarter (1925), which cannot be held as other than satisfactory when considered with the index figure of the period.

# Part IV.-Notes and News.

## THE ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION.

THE usual Quarterly Meeting of the Association was held at the Rooms of the Medical Society of London, 11, Chandos Street, W. 1, on Tuesday, November 17, 1925, Sir Frederick Mott, K.B.E., M.D., F.R.S., President, in the Chair.

The Council and Committees met earlier in the day.

#### MINUTES.

The minutes of the last quarterly meeting, having already appeared in the Journal, were taken as read and approved, and signed by the Chairman.

## RETURN OF DR. J. CHAMBERS, THE TREASURER.

The President said he was sure all the members were glad to see their old friend and valued member and Treasurer, Dr. J. Chambers, back after his illness.

#### FUTURE STATUS OF THE ASSOCIATION.

The President announced that the Association had received permission from His Majesty to have affixed to its title "Royal," so that in future it would be known as the "Royal Medico-Psychological Association." It was hoped that the application which had been made for a Charter would be successful.

#### THE GASKELL PRIZE.

The President said the Gaskell Prize had this year been awarded to Dr. W. S. Dawson. Two other candidates had also shown great merit and would receive some recognition.

#### MATTERS WHICH HAD BEEN BEFORE THE COUNCIL.

The question had arisen of the appointment of two delegates to attend before the Departmental Committee on Superannuation of Employees of Local Authorities, and the subject was before the meeting for discussion. (There was no response.)

The next matter which concerned the meeting was the question of the Association moving to other and more convenient quarters. The Council had decided to give to the Medical Society of London the agreed six months' notice of the intention to leave. It was felt that there would be many advantages in having, as the Association's home, the new house of the British Medical Association. No action, however, would be taken until further inquiries were made and agreements put in writing.

## THE SEVENTH MAUDSLEY LECTURE.

The President said it was left in the hands of the President, the Secretary and the President-Elect to appoint a Maudsley Lecturer, owing to Sir John Macpherson not being able to fulfil this engagement.

[As we go to press, we are informed that Prof. G. M. Robertson, M.D., F.R.C.P. has accepted the President's invitation to deliver this lecture.—Eds.]

## OBITUARY.

## THE LATE DR. LANGDON DOWN.

The President said he was sorry to have to announce the death of Dr. Percival Langdon Down. He asked Dr. Cole, who knew the deceased member intimately, to say a few words about him.

Dr. R. H. Cole said that Dr. Percival Langdon Down was known to him, as he, the speaker, visited quarterly the institution with which he was connected. The deceased and his brother Reginald were old members of the Association, and they had done valuable work in connection with mental deficiency, being distinguished sons of a very distinguished father. It was much to be regretted that

Dr. Langdon Down had been cut off in this way in the prime of his life, leaving behind him a wife and family. He did not doubt it would be the wish of members present that a vote of sympathy and condolence should be sent to the family.

This was accorded by members rising in silence in their places.

#### ELECTION OF CANDIDATES AS ORDINARY MEMBERS.

The President nominated Dr. Brooks Keith and Dr. R. Eager as scrutineers of the ballot. The candidates were all duly elected as follows:

McManus, Hugh Charles, M.B., Ch.B.Vict. and Liverp., D.P.M., Assistant Medical Officer, Lancaster County Mental Hospital and Park Prewett, Basingstoke.

LITTLEJOHN, MARY VICTORIA, M.B., Ch.B.Aberd., D.P.M., Assistant Medical Officer, County Mental Hospital, Hatton, Warwick.

SCOTT, FRANCIS LEONARD, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Kent County Mental Hospital, Maidstone.

HERON, JOHN, M.B., Ch.B.Edin., Assistant Medical Officer, Kent County Mental Hospital, Maidstone.

LASCELLES, WILLIAM JAMES, M.B., B.Ch.Belf., D.P.M., Cane Hill Mental Hospital, Coulsdon, Surrey.

The President, having an unavoidable appointment elsewhere, expressed his regrets, and having to leave the meeting, Dr. Percy Smith then took the Chair.

#### DISCUSSION ON INSANITY AND CRIME AND THE ATKIN REPORT.

Dr. John Carswell, in opening the discussion, said that it could be taken that, at least in form, the McNaughton Rules had received such fresh support as to preserve them in being for another generation. Yet the medical profession would not admit that the controversy was ended; indeed, there seemed a desire for adjustment of the medical and legal points of view. The rule recommended by the Atkin Committee read as follows:

"It should be recognized that a person charged criminally with an offence is irresponsible for his act when the act is committed under an impulse which the person was by mental disease in substance deprived of the power to resist." The committee added: "It may require legislation to bring this rule into effect,"

and later, "We have no doubt that if this matter were settled, most of the criticisms from the medical point of view would disappear."

Members of the Association, Dr. Carswell said, would acquit themselves as medical men acquainted with the clinical aspects of disorders of mind of expressing their ideas as to what they might regard as the test of criminal irresponsibility in these terms, which were lawyers' terms, and, indeed, all the trouble had arisen in that way. Did the accused know what he was doing? And if he knew, did he know that it was wrong? These were the formulæ framed by lawyers, and the psychiatrist had no responsibility for them. Fitzjames Stephen, in his History of the Criminal Law, vol. ii, p. 174, after considering Maudsley's observations, said:

"I understand by the power of self-control the power of attending to general principles of conduct and distant motives and of comparing them calmly and steadily with immediate motives. Diseases of the brain and the nervous system may cause definite intellectual error, and if they do so, their legal effect is that of the innocent mistakes of fact. Far more frequently they affect the will by either destroying altogether or weakening to a greater or less extent the power of steady, calm attention to any train of thought."

Dr. Carswell went on to say that a series of cases in recent years were available to show that judges had charged juries in the sense indicated, and even in the much debated Ronald True case Mr. Justice McCardie left three questions to the jury: the first two were in the terms of the McNaughton Rules, and the last was expressed in these terms:

"Even if the prisoner knew the physical nature of the act, and that it was morally wrong and punishable by law, yet was he, through mental disease, deprived of the power of controlling his actions at the same time? If yes, then, in my view of the law, the verdict should be 'Guilty but insane.'"

Dr. Carswell said the point he wished to make was the following: All the judges who delivered charges in the sense he had quoted agreed that uncontrollable impulse could be read into the McNaughton Rules—i.e., the rules were logically insufficient unless some such idea could be incorporated with them. The recommendation was not based upon any unproved or doubtful category of mental disorder, nor upon any principle of criminal responsibility not already recognized. His object in this communication had been to start a fresh discussion of the problem of insanity and crime from what he understood to be the point of view of the Atkin Committee, with the hope of reaching some points at which medical men could agree that the legal conception of responsibility of the insane was more in accordance with the clinical facts as they were known to psychiatrists than at present was the case.

Dr. Barker Smith said that people were responsible in various degrees for what they did, and that was largely proportional to their education and culture. Many men acted with the same quick, unreflective impulse as lower animals. This question of responsibility in a particular person was a question for the medical man, not for the lawyers.

Sir H. BRYAN DONKIN said Dr. Carswell seemed to think that the conception of irresistible impulse was implicit in the McNaughton Rules—a very strong statement to make in his, the speaker's, view. And he did not see that any practical result could arise from it.

Dr. D. K. Henderson said he did not know that the term "irresistible impulse" had ever been properly defined, yet it was due that this Association should have a definition of it. In medico-legal cases the question of responsibility constantly came up, and if this question of irresistible impulse was likely to be brought into them, the issue would be more complicated than at present. Another important kind of case was that in which a prisoner's state of mind was questioned, and sometimes the man would be sent to a criminal asylum without having been tried—i.e., without the question having been decided whether he had committed the crime or not. He suggested it would be well to try to arrive at that point in the cases in which there was a certain amount of doubt.

Dr. G. D. McRAE said it was difficult, in dealing with such a subject, to stick to the point of the author of the discussion; but, like Dr. Henderson, he had felt that various points arose which afforded an opportunity of ventilating one's ideas.

Was an insane man criminal, whatever he might do? If an insane man committed an act, was he guilty? What did guilt mean? It was cruel to say that a man who was ailing in his mind could be a subject of guilt in anything he did. A man's insanity, in anything he did, freed him from guilt. The expression "criminal lunatic" was archaic. He suggested that the individual should be tried, to ascertain whether he committed the act or not. If he did commit the act and was found to be insane, the verdict should be "Proven but insane," not "Guilty but insane." If one mentioned to a lawyer that the prisoner was insane, but that the act should be proved, he would say an insane man could not instruct his lawyer. An offence could not be proved against a man if he was not in a position to help himself out of his difficulty by instructing counsel. These points gave one food for thought.

A further point was that recently in this Association there had been an attempt to believe in the doctrine of partial responsibility. What had to be settled was, Did it concern medical men whether a person was responsible or not? Was not that a legal matter? The medical man had to say whether the person concerned was sane or not, and leave the responsibility to the legal people when he was tackled on the point. It was said that medical superintendents admitted partial responsibility in the way they conducted their institutions; that they placed a patient on parole, and that he might escape or might abuse his parole. His answer to this was that this was not partial responsibility; if a patient was placed on parole and granted privileges, it was as a test as to whether he could be considered responsible. If the test was found to be a failure, then the patient was not fit to be considered responsible; the medical superintendent was responsible for such a man until he, the latter, satisfied him that he could be considered responsible. The speaker considered that there was no such thing as partial responsibility. If a man was insane, he was not to be held responsible for any act committed by him.

Dr. T. B. Hyslor regretted he arrived too late to hear the paper, but from

what he had heard of the debate which followed it he gathered that the question centred around the subject of responsibility, and as to how it was dealt with at He thought that until the medical profession woke up to the fact criminal trials. that it gave evidence on a question which was not at issue, namely, on the question of insanity, whereas the Judge charged the jury on the question of responsibilitya different matter—they would always be playing at cross-purposes, and would be working under the heading of that absurd McNaughton ruling which had been a cause of grave injustice. Of that one might cite innumerable examples. was the case of a man who murdered four people in the same room, and after he had done the act he went to seek for two others on a sofa in the same room. The case came for trial, and it was proved that during service out in the East he had had epileptic seizures. Here was a case in which no insanity was observable, but he had a post-epileptic furore. This evidence was brought out before the Lord Chief Justice in the Higher Court of Appeal, and the speaker gave evidence. They said they did not know such things, they did not possess the knowledge which was possessed long before Tut-Ank-Amen, therefore they saw no reason to alter the decision, and in due course the man was hanged. That might be good law, but it was very bad medicine. Until it was realized that there was a big fight, that the medical witness must give evidence on the question of responsibility, not much progress would be made. It was only right that medical men should see to it that they were examined and cross-examined on the question at issue, not that the Judge, after hearing the medical witness on insanity, should turn round and charge the jury on the question of responsibility, which had not been dealt with in the slightest degree. He thought the McNaughton ruling would always be rotten and a source of grave injustice in individual cases so long as a case was tried on one point and the jury were charged on another.

Dr. W. C. SULLIVAN said he thought members would be willing to join with him in thanking Dr. Carswell for his opening speech. It was necessary to recognize that the McNaughton Rules were in reality founded upon a contradictory and unjustifiable view of the jury. They assumed such a degree of stupidity of the jury that it was necessary for the medical evidence to be filtered through the strainer of the McNaughton Rules. The doctor giving evidence had no opportunity of expressing his views in full, and in the clinical terms with which he was familiar, because it was supposed that the jury could not understand it until it was translated into the complicated phraseology of the McNaughton Rules. And then they assumed the jury to be so extremely gifted and intelligent that they could appreciate moral and legal values. It was assumed that the jury would be able to distinguish exactly between whether an act was unresisted or irresistible. remedy was not to give a complicated analytical rule with various details on which the medical man had to give an opinion-very often when nobody else could give it. These defects in the Rule had the result of excluding the jury from having a fair issue placed before them, and left the question in the hands of the Judge. If strictly interpreted, the McNaughton Rules, as laid down by the Judges, would probably involve most of the criminal lunatics in the death sentence. Trial in a case involving insanity was not a trial by jury, but trial by a single judge, who might have peculiar views on the subject. Sometimes the Judge took a commonsense view. To do this, on account of the McNaughton Rules, he had not only to give a subtle metaphysical explanation of them, which made them include the irresistible impulse element, but he also had to define the medical evidence. There was a case tried at the beginning of the century; it was one of dementia præcox, who died after a few years. He murdered his mother because he wanted to leave home and make a fresh start, and he felt he could not do so without being liberated from the family restraints. The case was tried before Justice Grantham, who was not distinguished for any great regard for medical evidence. Two medical witnesses were called and strictly examined according to the McNaughton Rules, and they both said—having the fear of Grantham in their minds—that the man, who clearly knew what he was about and what he had done, could not be regarded as exempt from punishment, in fact one of them said, before he was asked, that the man was responsible. Mr. Justice Grantham then charged the jury, stating that medical and legal opinions on insanity were different, and then said, "This man is sane and responsible; use your own common sense; look at the man!" It was not a very dignified spectacle, and it was one in which weak-willed medical witnesses could easily get into.

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He wished to point out that it was possible to use the McNaughton Rules, but in that case the only question on which the medical man could give evidence was the sanity or insanity of the prisoner, but if he gave it in the form of a complete report, he could be examined and cross-examined. The jury had to decide whether he was so insane that he should be hanged or not. The jury were the representatives of the public in the matter, and it was conceivable that, under certain circumstances, certain types of crime might be more leniently treated than others, and a jury in a particular case might find that a man more or less abnormal might be properly hanged. There were very few murderers in whom one could not find something which was defective or abnormal, and which could be magnified by medical witnesses so as to produce a verdict of "Guilty but insane." were left to the jury, they would form their own opinion on the facts of the prisoner's mentality, and on the history of the various episodes in the prisoner's antecedents, and their view of the value of the medical evidence. They would use their own common sense as to how far it was likely a man was a desperate homicidal lunatic from his birth, and yet should have been able to attain to considerable eminence in his profession; and how another man, though an epileptic, should carry on his work as a steeple-jack.

Dr. T. C. MACKENZIE asked whether Dr. Carswell regarded irresistible impulse as operative in sane people as well as the insane. Was sanity altogether immune from the working of irresistible impulse? Or where was the dividing line to be drawn? The whole question of reflex or instinctive behaviour was important, and it was bound up with the question of self-control. He thought much might be learned on the point he had raised from Dr. Rivers's book, *Instinct and the Unconscious*, a remarkable piece of work, which was instructive for the legal as

well as for the medical profession.

Dr. D. Ross said he was reminded by this discussion of an article by a Frenchman, in which an attempt was made to frame a standard of responsibility. In one or two departments of France they had done their best to institute a sliding scale, and that author concluded that it was chaotic, and that it could not be otherwise. He said one could not frame a standard, and that the whole crux of the matter was as to whether the man or woman was sane or not.

Mr. Donald Carswell (Barrister-at-Law) said that many hard things had, as usual, been said about the McNaughton Rules, but the difficulty which occurred to him was this: He agreed with the hard things which might be said about them, and he had said a few himself. But they were there, and how were they to be got rid of? It was easy to make out a case, but they were the law, and he would say, speaking as a lawyer, that there was not the slightest chance of the lawyers ever departing substantially from them. In those circumstances it seemed to him only reasonable that no opportunity should be lost of trying to find, however imperfectly, and however open to theoretical criticism, some concordat with the legal profession. It could only be done by agreeing with one's adversary, and in this case it was suggested that the Atkin Report afforded an instance of one's adversary "being in the way." It was worth while following

that up; it might be with no result, but it was worth considering.

He had no love for the term "irresistible impulse," and he agreed with Dr. Henderson that the lawyers should define what they meant by it. There were three senses, as far as he knew, in which the expression "irresistible impulse" was used by lawyers. There was, first, the obvious sense of reflex or instinctive action. In a case like that, he thought, one clearly came to the McNaughton Rules, for where a man acted instinctively or blindly, it could not, in any reasonable sense of the word, be said that he knew what he was doing; he might know immediately before, or immediately after, but there was, one might suppose, some brief interval in which he did not know. Consequently, it was not necessary to drag in irresistible impulse at all. He noticed that Lord Justice Atkin had some difficulty on that point; it would be difficult, Lord Atkin thought, to distinguish between sane and insane irresistible impulses, but he stuck to his guns and made the recommendation, because where a man's mind did not accompany the act, it was immaterial whether he was sane or insane. And to narrow the benefit of the rule down, as Lord Atkin did, to a case where the irresistible impulse was due to mental disease, seemed very much like conferring irresponsibility on a man provided he had red hair or a long nose, for the insanity had nothing to do with it. The second case was the ordinary sort of irresistible impulse which one saw expressed

by many judges, for example the present Lord Chief Justice, when they were dealing with the plea of irresistible impulse. The third made the irresistible impulse really an abuse of terms. Yet, for some strange reason, many lawyers seemed to have used irresistible and uncontrollable impulse in a sense which was very wide. When one looked at Stephen's and Justice Bray's charges, one saw there was no question of impulse at all. Mr. Justice Bray simply said the man was not a person who was able to regulate and order his conduct; that was not the same thing as talking of controllable and uncontrollable impulse. But it seemed that there were two schools among lawyers—one who wanted to take control of impulse in the wide sense, and that of Lord Justice Atkin, who would take it in the narrower sense. And they were always playing fast and loose between them, which was nevitable, but in a committee composed as the Atkin committee was composed it ought not to have been done.

He was not very hopeful about legislation, and that seemed a bad way of dealing with it, unless there could be agreement. And, on the other hand, the outlook in court was hopeless. Judges, he thought, were rather disingenuous on this point. Lord Alverston said that when the time came they would not shrink from the duty of pronouncing on this important question; judges did not say the time never could come because the Crown had no right to appeal against acquittal. Cases were referred to showing very liberal charges by Judges, then the Court calmly said they were not in point, because the finding of the jury negatived the plea put forward by the prisoner, and so it was unnecessary for the Court to decide. Therefore it was impossible to look for assistance from the Court of Criminal Appeal. What would help the medical profession in that way he did not know.

Dr. J. G. Soutar said that after all the discussion which had taken place he was still of the same opinion which he had held all through. It was that he had never yet seen a case in which he could say that irresistible impulse was the only evidence of mental disorder. When this plea of irresistible impulse was suggested, investigation often showed—not then perhaps, but later—that a definite idea preceded this particular act, that in many cases it was a premeditated act, that under certain circumstances this act, which was looked upon as impulsive, was the one which would be committed. One could find other indications of mental disorder in those persons who had what was supposed to be an irresistible impulse. Among the community in any mental hospital it was common to find that impulsive acts were committed: they were only incidents in the course of a general mental disorder, and it would be difficult to stand up and plead that simply because a person committed an impulsive act, therefore he was insane and irresponsible. The case which had been quoted he did not regard as irresistible impulse; it was not entirely automatic, and the person did not know what was the nature of the act. It was well known that impulsive acts were committed by quite sane people. and the impulse, in that sense, was by no means an indication of mental disorder. And if it was widely recognized that impulsive acts were characteristic of sane people, he did not see why, in particular circumstances, it should be said that impulsiveness was an indication of mental disorder and irresponsibility. His feeling was that this interpretation of impulse could not be read into the McNaughton Rules or findings, and that was the great stumbling-block in regard to the evidence. If the McNaughton finding could only be wiped out and the requirement that all medical evidence must come within that finding could be done away with, medical witnesses would be in a better position in cases of this kind. The medical witness had to testify to the facts as evidence in every case, and then it must be left to the judge and jury to say whether the facts testified to by skilled observers were indicative of that degree of unsoundness of mind which rendered the person irresponsible for his act.

The Chairman (Dr. Percy Smith) said he did not intend to traverse the debate, but he wished to say that the Association had done the best it could to show that the McNaughton Rules were obsolete, or that they should be done away with, and that every case should be tried on its merits, with the fullest possible evidence. It was true that if McNaughton had been tried by these rules he would have been hanged. As it was, he was an ordinary case of insanity, who murdered a man by mistake, whom he believed was the centre of the organization against him, and he was sentenced as a criminal lunatic, and he remained as such until he died. But the speaker feared the McNaughton Rules were now, as it were, tied tightly round the necks of professional men by the verdict of the Court of Appeal in the

"True" case. In spite of that, as members knew, the Home Secretary was able to get further evidence of True's condition, and True was placed under care.

With regard to Dr. Henderson's remark that there were patients who had not been tried and yet had been put away as criminal lunatics, or sent to asylums before trial, the late Mr. Trevor said that on visiting Broadmoor he frequently heard inmates who had been found insane when awaiting trial say that they never had been tried, and that it had never been proved they committed the crime with which they were charged.

The point made by Dr. McRae about the parole of patients in mental hospitals was a very important one. In that case, as Dr. McRae said, it was the medical superintendent who took the responsibility, therefore if a patient escaped while he was on parole, he was still regarded as insane, and any act he might commit then he was not fully responsible for.

Dr. J. CARSWELL, in reply, said he had been greatly struck by the steadiness of the Association. It had committed itself and given evidence, and none more pointedly than Dr. Percy Smith, and it was turned down by the Atkin Committee. The Association's Committee said what Dr. McRae and others wanted them to say; they said that the business of the medical witness was to testify to the state of mind of the accused person, and, having said so, all the questions concerning responsibility were purely legal, and the lawyers could settle them for themselves. Having established that a man was insane, the medical witness considered that his duty was ended, and the Court should say whether they thought the evidence meant the man was insane, or not. The Association stood by that position, and he was delighted to find to-day, in spite of his efforts to lead members on, that they still stood firm. That was the only sound and logical position. But they were not dealing with logic just now; they were dealing with Lord Justice Atkin and his Committee, and with a public opinion, which was very far from being logical. And, reading between the lines, he, the speaker, concluded that Lord Justice Atkin was all the time indicating in his Report, "Do find us a way out." The speaker thought that was a reasonable position, seeing that the legal and the public opinion were so hostile to the frank abandonment of the MacNaughton Rules altogether, and that, at any rate, it was up to the Association to discuss—and perhaps they could profitably discuss for five or ten years what there was in Lord Justice Atkin's suggestion. On reading the Report carefully and re-reading it, and reading the charges of judges to juries and the cases, one was forced to the conclusion that, without admitting it, they wanted to find some formula which would practically nullify the McNaughton Rules. If this was the lawyers' way of getting out of it, could not the medical side help them? Discussion would reveal the futility of much of the position. The lawyers had not defined irresistible impulse; in fact there was one passage which would interest Dr. Ross, which showed the fearful entanglement that such an acute mind as Lord Justice Atkin's got into when it started with this irresistible impulse idea: "We appreciate the difficulty of distinguishing some such cases from cases where there is no mental disease." Evidently there ran in his Lordship's mind cases in which there was mental disease undoubtedly, no mental disease except impulse, and went on to illustrate what he meant by the kind of impulsive conditions not associated with mental disease, such as criminal acts of violence, or sexual offences, where the impulse at the time was actually not merely uncontrolled, but uncontrollable. That answered Dr. Ross's question, and stated that ordinary people had uncontrollable impulses. The suggestion contained in the middle of the sentence quoted, about sexual offences, probably gave the clue to what was in Lord Justice Atkin's mind. There were certain conditions in which things happened which were seriously regarded, and Dr. Carswell supposed his lordship would call that uncontrollable impulse.

The CHAIRMAN said he thought the Association was greatly indebted to Mr. Carswell for having printed in his book the Report of Lord Justice Atkin's Committee and the whole of the True case, so that it would be there for reference whenever the question should come up again-perhaps in twenty or thirty years'

## SOUTH-EASTERN DIVISION.

THE AUTUMN MEETING of the South-Eastern Division was held by the courtesy of the Committee of the Hospital and Dr. T. A. Ross at The Cassel Hospital, "Swaylands," Penshurst, Kent, on Thursday, October 15, 1925.

There were 40 members present and several visitors.

The members were shown round the Hospital and grounds by Dr. Ross and his staff, and were then entertained to luncheon, at the conclusion of which Dr. F. H. Edwards proposed the health of Dr. Ross, to which the latter replied.

Prior to this there was a meeting of the Divisional Committee of Management. The meeting was held at 2.15 p.m. Lt.-Col. J. R. Lord was called to the chair at the general meeting.

The minutes of the last meeting were taken as read and confirmed, and signed by the Chairman.

The following were elected members of the Association:

JOHN REGINALD ALEXANDER MADGWICK, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Colney Hatch Mental Hospital, New Southgate, N. 11.

Proposed by Drs. S. J. Gilfillan, J. K. C. Laing and Noel Sergeant.

HUGH SCOTT FORBES, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Colney Hatch Mental Hospital, New Southgate, N. 11.

Proposed by Drs. S. J. Gilfillan, J. K. C. Laing and Noel Sergeant.

James Flind, M.B., Ch.B.Glasg., Senior Assistant Medical Officer, Peckham House, Peckham, S.E. 15.

Proposed by Drs. F. R. King, E. L. Williams and Noel Sergeant.

RHODRI GWYN WILLIAMS, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, London County Mental Hospital, Bexley, Kent.

Proposed by Drs. G. Clarke, J. Brander and Noel Sergeant.

The date and place of the Spring Meeting was fixed for April 1, at St. Andrew's Hospital. Northampton.

Dr. Ross read a paper on "Swaylands" and the work done there, which was followed by a discussion in which Drs. H. Baird, Helen Boyle, C. H. Caldecott, J. Carswell, F. Dillon, F. H. Edwards, E. Mapother, N. G. Masefield, O. P. Napier Pearn, A. A. W. Petrie, H. Wolseley-Lewis and Noel Sergeant took part. After some remarks by the Chairman Dr. Ross replied.

The members were then entertained to tea.

## SOUTH-WESTERN DIVISION.

THE AUTUMN MEETING of the Division was held, by the kind invitation of Dr. Arthur Townsend, at Barnwood House, Gloucester, on Thursday, October 29, 1925.

Twenty-one members and 2 visitors were present.

Dr. J. G. Soutar was voted to the chair, and the minutes of the last meeting were confirmed and signed.

A letter from the Hon. General Secretary was read, notifying that His Majesty had graciously commanded that in future the Association should be styled "The Royal Medico-Psychological Association."

Dr. Starkey was nominated as Hon. Divisional Secretary, and Drs. Eager and Soutar were nominated as Representative Members of Council for the Division.

The Spring Meeting for 1926 was fixed for Thursday, April 29, at the Bristol City Mental Hospital, Fishponds, on the kind invitation of Dr. Barton White, and the Autumn Meeting for Thursday, October 28th, at the Hereford City and County Mental Hospital, on the kind invitation of Dr. Grimmond Smith.

Dr. H. C. Waldo, Deputy Superintendent, Barnwood House, then introduced a discussion on "Admission Blocks and Voluntary Boarders." His paper was full of interesting suggestions and acute criticism, and led to a lively discussion, in which Drs. A. Townsend, N. R. Phillips, Lavers, Barton White, J. G. Smith, J. G. Soutar, R. Eager and the Hon. Sec. took part.

Before the meeting members were afforded an opportunity of visiting the wards, and inspecting the convalescent villa, farm and beautiful grounds of the Hospital.

Dr. Townsend most hospitably entertained the members to lunch, and provided tea at the conclusion of the meeting, for which he was accorded a hearty vote of thanks, moved by Dr. H. C. MacBryan.

## NORTHERN AND MIDLAND DIVISION.

THE AUTUMN MEETING of the Division was held, by the courtesy of Dr. W. J. N. Vincent, C.B.E., at the South Yorkshire Mental Hospital, Wadsley, Sheffield, on Thursday, October 29, 1925, at 2.30 p.m.

The members were shown round the Hospital and grounds and were then entertained to lunch, at the conclusion of which the health of Dr. Vincent was proposed. In his reply Dr. Vincent gave some interesting facts about the development of the Hospital.

There was an attendance of 22 Members and 6 guests.

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Dr. Vincent was voted to the Chair and the minutes of the last meeting were confirmed and signed.

The following candidate was balloted for and elected an ordinary member of the Association:

HARRIETTE APPLEBY WILSON, M.B., Ch.B.Leeds, D.P.M., Assistant Medical Officer, West Riding Mental Hospital, Wakefield.

Proposed by Drs. J. Shaw Bolton, M. J. McGrath and J. Gilmour. Drs. T. S. Adair, G. E. Mould and Bedford Pierce were re-elected members of the Divisional Committee.

Drs. P. B. Mumford and L. C. F. Chevens then read a paper on "Sudorific Reaction in Certain Types of Psychoses."

Dr. R. M. CLARK showed a series of stereoscopic microphotographs of spirochætes in the brains of general paralytics.

Dr. F. Back described three cases, illustrated by lantern-slides—one of angioma of the brain, one of hyperostoses of the skull, and one of pigmentation of an unusual character due to disease of the suprarenal glands.

The angioma of the brain occurred in an imbecile girl, æt. 14, who had suffered from both minor and major fits from the age of nine months, and who also had a nævus on the face and who died of disseminated miliary tuberculosis, including tuberculous meningitis, there being also several rows of deposits of calcium in the outer layers of the cortex, as shown in the microphotograph, and the question arises whether the angioma is causally related to these deposits, or whether they result from a tuberculous process which had gone on from infancy and flared up at the age of 14. The brain is being further investigated by Dr. Elizabeth Eaves, who examined it in conjunction with Dr. Back. The brain was asymmetrical, the weight being 37 oz., the right hemisphere—the one most affected by the telangiectases-being the smaller.

The case of hyperostoses of the skull was put forward for diagnosis. occurred in a woman, æt. 89, who had had persistent auditory hallucinations and who was in a state of dementia at her death. She had had no other symptoms due to the overgrowth in the skull-bones. The extremely thick and nodular skullcap itself was exhibited and a photograph of the interior of the base of the skull, showing large projections in all the cranial fossæ and especially in the petrous bones around the internal auditory meatus. There was no affection of the facial bones or tibiæ, and the pituitary was normal. The bone resembled that seen in leontiasis ossea in that there was no distinction between the hard ivory bone of the surface, as ordinarily, and the cancellous bone in the centre, both having assumed an intermediate character, the whole bone being more or less of the same texturethick and heavy. Microscopically there were numerous vessels surrounded by connective-tissue cells within laminæ of bone, very irregular in width and contour, containing ordinary bone-corpuscles. The hyperostoses were probably inflammatory in origin. Unfortunately the Wassermann reaction was not done in this

The third case was of brown pigmentation of the face and hands in a school teacher, æt. 69, who had suffered from chronic mania with terminal dementia. On exposure to the sun erythema quickly occurred, and was followed by desquamation, which left the skin rough, scaly and pigmented brown. The condition bore some resemblance to pellagra, but there was no history of food deficiency, no exaggeration of the reflexes or spasticity of gait; there was wasting. The blood-pressure was 130 systolic, 90 diastolic. He had not taken arsenic or other drugs likely to cause the pigmentation. There was no glycosuria. The pigmentation was on the exposed parts, and there was a very clear line of demarcation on the face, as shown in the photograph, in contra-distinction to Addison's disease,

where the pigmentation is usually on the parts compressed and other covered portions, axillæ, mouth, etc. Yet at the autopsy extensive fibrosis of the suprarenals was found, there being little suprarenal tissue remaining.

The cases led to an interesting discussion, in which two similar cases of hyperostoses of the skull were cited by Drs. E. S. SIMPSON and T. W. DAVIDSON.

Dr. ELIZABETH C. EAVES (Sheffield University) then read two notes:

- (1) "The Possible Significance of Stainable Fat in the Nerve-Cells in Epilepsy." Chromatolysis and the appearance of stainable fat in the nerve-cells are two conditions found in epilepsy. Numerous experimenters have found that the first condition may be brought about by fatigue. Dr. Eaves produced convulsions in decerebrate animals by faradizing the midbrain after injection of strychnine. The nerve-cells from the experimental animals showed stainable fat, whereas those from control animals exhibited none. The conclusion may possibly be drawn that in epilepsy the large amount of fat in the nerve-cells is the direct result of the convulsions.
- (2) "Pathological Examination of the Ductless Glands in a Case of Mongolism." All the ductless glands were comparatively normal in size and histological appearance with the exception of the pituitary. The latter weighed about half the usual amount and showed considerable fibrosis in the pars anterior.

It was decided to hold the Spring Meeting in April at the Gateshead Mental Hospital, Stannington.

## PROF. G. M. ROBERTSON ON PERSONALITY, MAGIC AND MEDICINE.

At the July graduation ceremony of the Edinburgh University Prof. G. M. Robertson, the promotor, addressing the gathering on "Personality, Magic and Medicine," said:

My first duty is a very pleasant one. It is to congratulate those who have to-day achieved the high honour of becoming graduates of this University. In a short time many will be engaged in practising medicine, and others will have scattered to distant parts of our wide Empire.

In the name of the University, I wish you all God-speed.

Your course of professional study has been a long and arduous one, and during it you "scorned delights and lived laborious days." Do not take this too literally, for promoters, like poets, enjoy a certain licence. I have no doubt that many of you, without detriment to your studies, have found time "to sport with Amaryllis in the shade." Gone, alas! are "the tangles of Neaera's hair." Since Milton wrote these lines fashions have changed.

You have all known what it is to suffer under the dark shadow of professional examinations. Such anxiety is a deadly poison to intellectual effort, but you have found an antidote in the magic of the Vice-Chancellor's touch, and of the cabalistic words which he has pronounced over every graduate. These graduation rites, however, are much inferior in picturesqueness and romance to those of a bygone age. A thousand years ago, at the famous medical school of Salerno, the Chancellor, or Rector, placed a crown of laurel on the brows of the successful graduate. Then he placed a ring on the graduate's finger. And finally, to mark the climax of the proceedings, the learned professors kissed the graduate. Even in those far-off days there were lady medicals!

No one has a good word to say about examinations. They are disliked by the professor who examines only less than by the student who is examined. They seem to be a sort of old-man-of-the-sea, of Chinese descent, who has fastened himself on the shoulders of our academic life. The Chancellor of the University, Lord Balfour, calls them "soul-killing institutions, bad for the teacher and bad for the taught." Now, if they are absolutely necessary in order to test your fitness for the practice of medicine, is it not strange that no test is applied to that which is the master-key to success as a physician, namely, "personality"? It is difficult to say what this personality is. Your patients know by instinct, as we are told in the well-known rhyme about Dr. Fell:

"I do not like thee, Dr. Fell,
The reason why I cannot tell,
But this I know and know full well
I do not like thee, Dr. Fell."

I make no imputations, but it is only fair to the medical profession to explain that Dr. Fell was a Doctor of Divinity.

Personality is described by some in poetical language as personal magnetism. By others it is regarded as a miraculous gift of Divine origin, the gift of healing. We are assured on the testimony of good people, like bishops, that there are persons, quite unequipped with any medical knowledge—indeed one might correctly say unhampered by any medical knowledge—who work miracles of healing. Such gifted beings are called "Healers" in order to differentiate them from medical men fashioned of common clay, whose little learning has been laboriously acquired, and whose power of healing, unlike theirs, is subject to definite limitations. The difference in the methods employed by the healer and by the doctor is that which exists between magic and science. As the philosophy of healing is obscure let us investigate for a few minutes the problems connected with magic and medicine, giving, of course, the place of honour to magic, by right of seniority.

There is no Chair of Magic in the University of Edinburgh. This is most unfortunate, because a knowledge of the history of magic helps us to understand the development of the human mind and also of science. Who can tell what chemistry owes to the search for the Philosopher's Stone—and pharmacology to the pursuit of the Elixir of Life? The Earl of Gowrie, who was killed in 1600, studied magic at Padua, but whether he did so in intra-mural or extra-mural classes we are not told. Sir Walter Scott, however, informs us that at the University of Toledo there was a Chair of Necromancy.

Although there is no special Chair of Magic in Edinburgh, this important subject probably survives in one or another of the existing Chairs. In the Faculty of Arts, the Chair of Natural Philosophy includes much that would have been regarded at one time as magic. Consider the applications of electricity alone. Last year when Wembley was opened thousands of persons in Princes Street Gardens heard a voice from the clouds repeating the Lord's Prayer, and then another voice, that of the King, addressing the people. Had King James VI, who founded this University, been present on this occasion, he would most certainly have regarded these as manifestations of a magical character, for he held strong views on witches and witchcraft.

In the Faculty of Medicine, magic, under a disguise, is also to be found. The preservation of life by insulin and the painless sleep of chloroform are, in a sense, magical. The protection from typhoid of millions of our fighting men during the war was in a sense as magical as the action of Moses when he made a serpent of brass, and it came to pass that all who beheld the serpent lived.

Magic consists not only in the performance of rites invoking occult agencies, not only in the employment of materials possessing supernatural power and virtue, but also in a certain habit or attitude of mind towards inexplicable phenomena. Now, there exists to-day a curious and most amazing difference, in the way that people have of looking, on the one hand, at phenomena of a physical kind, and, on the other, at phenomena connected with the treatment of disease—a distinction actually fostered by the Church. No educated person now believes that the applications of physics are magical. They merely illustrate the progressive unveiling of the forces of Nature and their subjugation to the uses of mankind. But it is not so with regard to the employment of remedies in disease. The element of magic in this sphere has never disappeared. No theory of disease is too fantastic, no line of treatment too futile to be accepted even by the most cultured.

The sick person has some excuse for his actions and beliefs, as he is never at his best; he is always off colour. He is more emotional and more suggestible. He is an easy prey to fears of ill-health, and he clutches eagerly at any remedy that chance brings within his reach. His mind is in an ideal condition to be worked on by magic. In colloquial language, "he is simply asking for it."

Next, let us see how readily the symptoms of disease lend themselves to treatment by magical methods.

However unpleasant symptoms may be to the patient, almost all pass away naturally in course of time. And if we exclude physical conditions, such as broken bones, we find that symptoms are almost exclusively mental. Pain is the basis of every symptom; malaise and discomfort are merely lesser varieties of it. And pain is a simple state of mind, just like the sensation of colour.

It seems to be felt in a particular region of the body, just as colour seems to be the property of an external object, but both the sensation of pain and the sensation of colour are experienced within the brain and in the mind. Because of this localization of sensation within the brain, pain may still seem to be felt in the foot although the whole leg has been amputated.

Pain is sometimes called real and sometimes imaginary, but to the patient both forms are real, and both forms are amenable to treatment by mental suggestion, whether magical or otherwise. Toothache, for example, due to an organic cause, such as the decay of a tooth, is, of course, "real" pain, as we can all vouch for, yet it sometimes happens that when the hand of a patient suffering from toothache touches the dentist's front door bell all pain suddenly vanishes.

Suppose now that a patient desires treatment of a magical kind. He may go to a Christian Scientist or to a Spiritual Healer; he may consult a plausible charlatan; or he may seek the vendor of a secret nostrum. In many cases he will benefit: and why not? The majority of symptoms pass away spontaneously; the treatment he receives is mental and therefore suits the symptoms exactly; mystery is invoked, and this appeals to the superstitious elements lying latent in the patient's mind; and lastly, the patient comes with a child-like faith in the treatment for which he asks.

As honest seekers after the truth we must face these facts. Look at Christian Science and its incredible development in America. It is a very simple therapeutic system, from which diagnosis is excluded, and it employs one remedy. Painfully inadequate as it seems to us, it has succeeded in founding cathedrals and in comforting millions. It has built seventy-four churches in this country and hundreds in America. Would that some of the money thus subscribed by grateful patients had found its way into the empty coffers of this University! Why do we not receive this grateful help? Is it because we have converted healing into a cold science instead of leaving it an impressive mystery and a passionate faith? For it has passed through these phases. Have we, like Martha, been careful and troubled about many things, material, but missed the one thing, psychic, that is needful?

Men and women hunger after the mystic and the wonderful; they are just big children in matters connected with illness; and their craving for miraculous cures will not cease till the progress of the science of medicine has rendered such cures superfluous.

Or the patient may consult a regular practitioner of medicine, and what follows? Almost inevitably the doctor will prescribe certain vegetable or mineral products, and the patient will derive benefit from his prescription.

Is this almost exclusive reliance on the physical action of drugs, when we know to what an extent symptoms are mental, either logical or scientific? How much of it is due to a mere desire to gratify the patient's faith in medicine out of a bottle? Or is it unconsciously derived from the pursuit of the "elixir of life"? We all know that traditions die hard, as witness the obsolete prayer to Jupiter, concealed in the symbol that heads our prescriptions.

Drugs undoubtedly possess pharmacological actions which are invaluable, as, for example, the effect of quinine in malaria, but symptoms are mainly mental, and medicines largely depend for the benefits they confer on the confidence of the patient in the physician and faith in his prescription. If this be so, then the drug treatment of minor ailments does not differ so very much from those other forms of treatment that consist merely of mental suggestion, though called by another name.

What distinguishes the doctor from the healer is his undeviating rationalism. His recognition of the mental element in disease, whether as a cause, as a symptom, or as a cure, is deficient. He has a horror of introducing mystery into his treatment, even though his patients have not yet emerged from the darkness of superstition, and his practice would probably increase if they believed that the letters M.B. after his name indicated that he was a Bachelor of Magic. And he could always assure for himself and his family a respectable livelihood among the credulous, who form the majority of the population, if we could honestly assert that the letters Ch.B. were conferred upon him because he was a Bachelor of Charlatanism.

It is not in the alleviation of symptoms, nor in the treatment of minor ailments, that medicine impresses us. It is in its confident challenge to the diseases that kill that the science of medicine reveals its greatness. Witness the attack on cancer, and the results just obtained by a graduate of this University. What also could be more convincing, what more impressive, than the simple statement that during

our life-time the death-rate has fallen from 22 per thousand to 12, and that the expectation of life has risen from 40 years to 55? The people of this country and of this generation have, through medical science, experienced in their own persons the fulfilment of the promise conveyed by the Prophet Isaiah to the dying Hezekiah: "I have heard thy prayer, I have seen thy tears: I will add to thy days fifteen years."

In conclusion, recoveries are effected by magical methods, by religion, by charlatanism, and by nostrums. The importance of these is not to be minimized because they occur in minor ailments, for once a neurosis or other illness has begun, no one can foretell how serious the end-results may not be. The medium of cure in all these cases is the mind. The body cannot get away from it any more than the body can escape the action of the force of gravitation. Its power is great both as a causative and a curative agent. It can produce organic changes; it can hasten or retard recovery.

In the next place, at the beginning of the Christian era the science of medicine was in its infancy among the Jews, who believed that disease was directly inflicted by God, or caused by evil spirits. In this, the twentieth century, can science accept such primitive pathology? The sphere of the Church is spiritual and moral; and the clergyman is honoured in every household and welcomed in times of sickness and sorrow. But the healing of the sick is a sacred trust of the physician, as absolutely so as the study of the heavenly bodies in their courses is the sphere of the astronomer, although Science can never forget that the Church did not concede even this point till Galileo had suffered.

In the last place, the most valuable asset of the physician is personality. Its influence in sickness is mental healing, and it is of greatest value when trained and directed. The methods of employing such healing are infinite, for they vary

with age and sex, with race and religion, and with circumstances.

Unquestionably, you, who have graduated to-day, are members of the only class fit to be trusted with the exercise of these great powers of healing. Your Alma Mater relies upon you because she knows that you possess a knowledge of the science of medicine, and because you follow the highest ideals of professional conduct. The superstitious and the ignorant are drawn, as by a magnet, into the pitfall of charlatanism.

Although you have passed no professional examination on this subject, you all have within you a psychic influence more powerful to relieve and more helpful in sickness than all the drugs in the British Pharmacopæia. This magical force is personality. It is this possession that makes medicine greater than a science. Go forth and use it wisely.

## THE NATIONAL COUNCIL FOR MENTAL HYGIENE.

SECOND ANNUAL REPORT OF THE COUNCIL, 1924-1925.

[An extract.]

In our first report brief mention was made of the initial work of the Council, which consisted mainly of the framing of bye-laws in order to establish the working arrangements of the Council. Under the articles of association the affairs of the Council were left entirely in the hands of an elected Committee of Members with power to delegate all or any of its powers to subsidiary Committees.

It was felt that the General Committee, meeting as one body, could not conveniently undertake the work of the Council, and that the wide field covered by the aims and objects of the Council would call for the setting up of appropriate subcommittees, composed of members with special knowledge and interest in the various sections of the Council's work.

Furthermore, the Council, to be truly national, should aim at embracing the whole country, and not be merely a metropolitan body with its offices and meetings in London. It was necessary, therefore, to set up machinery for the formation of local branches in the provinces, which would ultimately become the roots of the Council and form a network of endeavour for the furtherance of mental hygiene throughout the country, bringing the influence of the Council into the homes of the people.

So far one local branch only has been founded, but efforts in this direction are being made in other districts. Bye-laws defining the duties and responsibilities of the various officers of the Council were also necessary.

We are glad to report that so far these bye-laws have proved admirable for the purpose for which they were framed, and the work of the Council has proceeded smoothly and efficiently.

Considerable spade-work has been done by the three sub-committees set up in accordance with the bye-laws, and their reports cover in a large measure the activities of the Council during the year.

Some record, however, is called for regarding the work of the Council as a whole, of its General and Executive Committees and of individual members.

Meetings.—The Second Ordinary General Meeting was held at the Rooms of the Federation of Medical and Allied Services, 12, Stratford Place, London, W. 1, on Wednesday, September 24, 1924, at 5 p.m.

Two meetings of the Committee were held during the year, six of the Executive Committee, eleven of Sub-Committee No. 1, five of Sub-Committee No. 2, eleven of Sub-Committee No. 3, and three of the Sub-Committee for Propaganda and Collecting Funds.

A public meeting took place at the Concert Hall at Liverpool on October 23, 1924, at 3.30 p.m., the Lord Mayor presiding. Unfortunately the meeting took place in the week before the General Election, and consequently the attendance was not as large as it might otherwise have been. The speakers were: Sir Maurice Craig, Mr. J. G. Legge—ex-Director of Education—Canon C. E. Raven and Miss Bevan. Sir Leslie Scott had hoped to be present, but was unavoidably prevented.

At 5.30 p.m. there was a meeting for teachers, which was well attended. The speakers were Mr. Dingwall Fordyce and Sir Maurice Craig. Much interest was shown and many questions asked.

On the following day Sir Maurice Craig addressed a meeting of medical men, about sixty being present.

Although no resolutions were put at any of the meetings, the opinion generally expressed was that there ought to be a branch of the Council in Liverpool, and this has since been formed. The Council would like to put on record how much they are indebted to Dr. W. Johnson for his work in organizing the meetings and in connection with the formation of the Liverpool Branch.

Dr. Eleanor Kemp, First Vice-President, New York League of Mental Hygiene for Children, gave two lectures under the auspices of the Council to the Hospital Almoners' Association at Denison House, Vauxhall Bridge Road, London, S.W.

Dr. A. Helen Boyle has addressed various meetings during the year on behalf of the Council, among others two at Leeds, one at Watford, one at Berkhampsted and one at Dorchester.

Dr. Doris Odlum has also addressed meetings at Ashford, and the Archbishops' Advisory Board Conference at Swanwick; she also spoke before the Rescue and Preventive Sectional Committee of the National Council of Women in London on "The Need for Early and Preventive Treatment of Mental Disorder."

Royal Commission on Lunacy and Mental Disorders.—On intimation being received from the Royal Commission on Lunacy and Mental Disorders that it would be pleased to hear evidence from the Council, the Executive Committee allotted the task of preparing précis of evidence to the appropriate sub-committees. These were later considered by the Executive Committee and combined in a single document, which was passed at the General Committee meeting held on April 23, 1925.

Evidence was given on behalf of the Council on May 22, 1925, by Dr. E. Farquhar Buzzard (witness-in-chief), Dr. H. Crichton Miller and Dr. Reginald Worth.

Ninth International Prison Congress.—Dr. W. A. Potts, Dr. E. A. Hamilton-Pearson and Mr. W. Clarke Hall represented the Council at the Ninth International Prison Congress, held in London in August, 1925.

Criminal assaults on young persons.—A memorandum by Dr. W. A. Potts was presented on behalf of the Council to the Home Office Committee on "Criminal Assaults on Young Persons."

Sub-Committee memoranda.—We also publish the following memoranda, which have been prepared in connection with the work of the sub-committees:

Sub-Committee No. 1: On the Treatment of Patients Suffering from Neuroses, Psycho-Neuroses and Psychoses, by the late Dr. R. G. Rows and Dr. W. Dallas Ross.

Sub-Committee No. 3: On the Probable Causes of Mental Defect and Suggestions for dealing with them, by Dr. W. A. Potts and Dr. E. A. Hamilton-Pearson.

The following Memoranda are still sub judice: On the Future Scientific Investigation of the Causes of Mental Defect, by Dr. Neill Hobhouse and Dr. H. Frieze Stephens.

idem, by Dr. Neill Hobhouse, Dr. Hamilton-Pearson and Dr. H. Freize Stephens. International Congress.—The Council gave its adhesion to the proposal to hold an International Congress of Mental Hygiene Organizations in New York in 1926. Unfortunately the Committee in America, who are organizing the Congress, have not as yet been able to arrange the financial details, so the project has had to be postponed.

Changes in membership.—At the beginning of the year there were 183 full members and 32 associate members.

During the year 15 full members and 2 associate members joined the Council. The Council lost by resignation 14 full members and 7 associate members, and by death 3 full members.

The Council heard with much regret of the death of Dr. R. G. Rows, a prominent pathologist and psychiatrist and an original worker and teacher of great eminence. He had identified himself whole-heartedly with the aims and objects of the Council and had devoted much time and energy to the work of Sub-Committee No. 1.

The need for further financial support.—The income of the Council is barely sufficient to meet the everyday expenses of its office and the clerical work in connection with meetings, etc., and the expansion, and possibly the survival of the Council's activities, depends entirely on further financial support being forthcoming.

Funds are urgently needed to carry on the work of the Council in all its aspects. Among the more immediate projects are:

- (a) The appointment of a paid medical director.
- (b) The publication of a monthly bulletin.
- (c) The broadcasting of mental hygiene literature.
- (d) The organization of popular lectures on subjects connected with mental hygiene.
- (e) The holding of special meetings of the Council to hear papers, partake in discussions, etc.
  - (f) The preliminary financing of local branches.
- (g) The organization of research work, especially as regards the causes of mental deficiency.

Donations can be ear-marked for any special purpose within the aims and objects of the Council.

Finance, 1924-1925.—The Council again has to express its thanks to Dr. A. Helen Boyle for continuing to guarantee the rent of the Council's office.

The following have generously given sums of over £20 during the year: H. Aron, Esq., £150; Mrs. Knowles (in memoriam A. K.), £25.

The Secretariat.—Many applications for advice have been received, both personally at the offices or the Council and by letter, chiefly in regard to the accommodation and treatment of cases of incipient insanity. Although medical advice could not be given, it has been possible, subject to the medical attendant's approval, to supply useful information as to the best course to be pursued to obtain the necessary care and treatment.

During the year, with the increasing activity of the Council, there has been a great increase in the clerical work of the Secretary. In addition to the routine correspondence, it falls to her to type all the agendas, minutes and official correspondence of the Committees and various Sub-Committees. What this entails can be gathered from the reports of these Committees. The Council feel fortunate in having obtained the services of a zealous and efficient Secretary, who has shown herself entirely devoted to the welfare of the Council.

Acknowledgments.—The Council record their thanks to the Honorary Officers for their services during the year. Their labours are essential to the existence of the Council. More especially do the Council wish to express their gratitude to the Honorary Solicitors, Messrs. Charles Russell & Co., and to the Honorary Auditors, Messrs. Blackburns, Barton, Mayhew & Co.

In conclusion the Council feel that the year covered by this report has been satisfactory, in so far that it has witnessed a considerable extension of its sphere of

activities, and a steadily increasing recognition of its aims and objects by a wider public. Much more, however, remains to be done.

Courtauld Thomson,

Chairman.

James Leatham Birley,

John R. Lord,

Joint Honorary Secretaries.

[Full copies of the Report, with several important appendices, can be obtained on application to the Secretary to the Council, Room 55, Windsor House, Victoria Street, Westminister.—Eps.]

# MENTAL PROPHYLAXIS SERVICE OF THE SEINE DEPARTMENT, PARIS.

We have received an interesting account from Dr. Edouard Toulouse, an Honorary Member of the Association since 1901, of the work in connection with the mental Clinic in the Seine district which was started in 1922 and has been organized on similar lines to the Maudsley Hospital. Dr. Toulouse, of Sainte Anne Asylum, is Director of the Clinic, which is, however, administratively independent of the asylum, and directly associated with the out-patient department of the Paris Medical School under the direction of Prof. Henri Claude. The Clinic has been opened and developed by the Council General of the Seine, thanks to the unfailing initiative of M. Henri Rouselle, President of the Commission for Assistance.

In the out-patient department patients are seen daily, and there are full facilities for medical and surgical examinations by specialists. The department is under the direction of the asylum and hospital physicians. The consultations are free, but are reserved for inhabitants of Paris and the Seine district. The work is growing rapidly; there are no less than 30 patients to be examined every day, and 8000 patients have been treated in the department. In connection with the clinic there are pathological laboratories affording full facilities for modern methods of biological investigation.

There are separate pavilions for men and women, and the wards contain dormitories for quiet patients, and rooms for those who need temporary isolation and for those who are placed under observation until medico-administrative decision has been adopted in regard to them; this decision cannot be taken until all tests and inquiries into the case have been made. An atmosphere of comfort and cheerfulness has been obtained, thanks to inexpensive contrivances, such as a tasteful selection of paintings and furniture, some of which are gifts, and arranged according to the advice of generous decorators and artists.

There is a Social Service Department, which is headed by the physicians, and functions through trained social workers. Supervision of the cases in the out-patient department and of former patients who have been discharged from the hospital is undertaken. This service undertakes, also, the ascertainment of psychopathic patients in the various city centres, schools and factories. A visiting system has been planned for patients who have been brought to the attention of the service but who cannot attend at the out-patient department. This part of the service is of considerable value, and becomes more necessary every day. Financial help is also afforded to the needy through the medium of the various charitable organizations. Dr. Toulouse points out that by means of this "open" clinic care and treatment is effected without restrictive measures. Its directing principle is the preservation of individual freedom, for legal measures are only used when it is found necessary after testing, observation, inquiries and reports of social workers. He anticipates that the number of legal commitments will be constantly diminishing with the development of clinics of this kind.

## EDUCATIONAL NOTES.

The Maudsley Hospital, Denmark Hill, S.E. 5 (University of London).—Lectures and Practical Courses of Instruction (under the direction of Sir Frederick Mott) for a Diploma of Psychological Medicine. Course IX, 1926.

Part I.—(1) Eight Lectures on the Anatomy of the Nervous System. By Sir Frederick Mott, K.B.E., M.D., LL.D., F.R.S., F.R.C.P., on Tuesdays at 2.30, commencing on January 5, 1926.

Practical Instruction and Demonstrations. Demonstrator: Charles Geary.

(2) Eight Lectures on the Physiology of the Nervous System. By F. Golla, M.D., F.R.C.P., on Fridays at 2.30, commencing on January 8, 1926.

Practical Instruction and Demonstrations. Demonstrator: S. A. Mann, B.Sc. Lond., F.I.C.

(3) Eight Lectures on Psychology. By Henry Devine, M.D., F.R.C.P., on Thursdays at 2.30, commencing on January 7, 1926.

Practical Instruction and Demonstrations.—Sensation; psycho-physical methods; statistical methods; reaction times; association; memory; intelligence tests; muscular and mental work.

Part II will follow in April, 1926, and will include lectures and demonstrations. A detailed time-table will be issued later.

Posts as voluntary clinical assistants at the Maudsley Hospital may be granted without fee to practitioners of both sexes specializing in psychological medicine. These appointments can be either for whole or part-time work in wards, out-patient department or laboratories as desired. They can be held in conjunction with attendance at either part of the course for the Diploma in Psychological Medicine. Such an appointment will satisfy the requirements of the various examining bodies in respect of clinical experience of mental disorders for the Diploma in Psychological Medicine or for the M.D. in Psychological Medicine; its necessary duration depends on whether it is whole or part time. There are various other opportunities for clinical study, also without fee, to all attending the course. Applications and inquiries regarding these clinical facilities should be made to the Medical Superintendent of the Hospital.

Fees: For the whole course of Parts I and II, £15 15s.; for Part I separately, £10 10s.; for Part II separately, £10 10s.; for one single series of lectures in Part I, £4 4s.; for one single series of lectures in Part II, £2 2s.

Part I, £4 4s.; for one single series of lectures in Part II, £2 2s.
Inquiries as to lectures, etc., should be addressed to "The Director of the Pathological Laboratory," Maudsley Hospital, Denmark Hill, S.E. 5.

The Fellowship of Medicine, I, Wimpole Street, W., will collect fees from and issue admission tickets to medical men intending to take the course who are introduced by the Fellowship.

Institute of Psycho-analysis.—The following courses of lectures will be given to medical practitioners and medical students at the Examination Hall, Queen Square, W.C., on Friday evenings at 8.30 p.m.: "The Unconscious," by J. C. Flügel, B.A.; "The Theory of Sexuality," by Ernest Jones, M.D., M.R.C.P.; "The Psycho-pathology of Anxiety States, Phobias and Obsessions," by James

The course commences on January 15, 1926. For further particulars applications should be made to the Hon. Secretary, Dr. John Rickman, 26, Devonshire Place, W. 1.

# ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION LIBRARY.

THE following is a list of the Journals which are circulated from the Library:
American Journal of Insanity, Journal of Neurology and Psycho-pathology,
L'Encephale, International Journal of Psycho-analysis, Journal of Abnormal
Psychology, Mental Hygiene.

They will be forwarded on loan as they are published to any member notifying the Librarian, 11, Chandos Street, Cavendish Square, W. 1.

One of the main functions of the Library is that it is a place of reference; in consequence this opportunity is taken to remind members that should they from time to time have books which are old, or not wanted for any reason, the Sub-Committee would be glad to be given the opportunity of placing them in the Society's care. Presentation copies of members' own publications would also be gratefully acknowledged.

#### CORRESPONDENCE.

# To the Editors of the Journal OF MENTAL Science.

## THE REVIEW OF Sex Hygiene.

DEAR SIRS,—My attention has been directed to the review of my little book Sex Hygiene which appeared in the October issue of your JOURNAL. As I consider the review to be inaccurate, unjust and misleading, I hope you will kindly grant me a little space so that I may defend the book against the statements made.

In the first place, no claim is made that the book is a scientific treatise—it is meant to serve a far more useful purpose than many scientific books. It is intended for those men and women who, while they may lack something in the nature of education, are still fortunate enough to possess the average amount of commonsense.

Your reviewer writes of the book as though it were written for the express purpose of frightening boys and girls, and makes no mention whatever of the fact that in the Preface by a well-known clergyman, and in the author's Foreword, the statement is made three times that Sex Hygiene is not a children's book, but one to be read by parents, upon whom rightly falls the duty of warning their offspring against sexual pitfalls. But if the book did frighten children to the extent of preventing them breaking the laws of health and indulging in health-impairing habits, surely no harm would be done. Fear of the Police and the Police Court, and the penalties connected therewith, has prevented many a child from breaking the laws of the country.

When your reviewer states that every practising psychiatrist knows only too well the harm that such books as mine do, he makes a statement which it is impossible to take seriously. Well, Sirs, in regard to this, one of the most distinguished physicians and psychiatrists living was the first person to read the MSS., and he praised my book most highly, and has since also done his best to make it well known. Another very distinguished physician and psychiatrist and university lecturer has also promised to do all he can to increase the sale of the book.

Has your reviewer any facts to support the statement that masturbation is more extensively practised by females than by males? A number of neurologists gave me their opinions on this matter, and only one went so far as to say that it was practised to as great an extent (not to a greater) by females as by males.

Nor do I state that the rather serious deterioration of the British race is chiefly due to masturbation—although had such a statement been made it would have contained a large measure of truth: the statements made in the book are to the effect that masturbation is the root cause of many of the nervous troubles and disorders of a most distressing nature, causing men and women to be robbed of much happiness, health and efficiency.

Many mothers, who are quite incapable of giving instruction in sexual matters to their children, are also opposed to such being given in schools, or elsewhere. If all mothers possessed the desired standard of wisdom and intelligence all would be well, but unfortunately such is not the case; and we have also to face the hard fact that some mothers will talk loosely about a lecture on sexual matters which they did not hear delivered; to guard "a lady medical practitioner" against such persons, it would be wise to also have present a "suitable lady of high character" when talking to girls about matters connected with sex.

The terms "male" and "female" are used in connection with botany in the main portion of the book. The idea of making use of the terms "gentleman flower" and "lady flower" instead of male and female came from yet another distinguished physician and psychiatrist, who, during the war, rendered valuable service in the treatment of disabled soldiers, and who was one of the number who read the printer's proofs. After doing so he wrote stating that when talking to young children on sex matters he thought it would be wise to avoid using the terms "male" and "female"; but as the suggestion was made too late to permit of it being inserted in the main portion of the book, it appears only in the appendix. Your reviewer makes no mention of this latter fact.

Since the book has been published two of our best known Bishops have written in praise of it.

Now, Sirs, when such highly qualified men as those mentioned give the book the highest praise, there appear to be good grounds for considering your reviewer's criticism as fallacious, and unworthy of serious consideration by the general public.

That some psychiatrists should look upon masturbation as being a symptom, rather than a cause of mental and physical ill-health is alarming to social reformers. I have had many opportunities for getting at the truth in this matter in this country, and in addition I was able to pursue my investigations from 1907 to 1914 in France, Germany, Austria, Italy, Belgium and Switzerland. Far from being a symptom, in my opinion masturbation is a very potent cause of ill-health. As I have already stated, the book is intended for parents generally, and if it is instrumental in bringing home to such parents the necessity of so training their offspring that entire avoidance of masturbation is the result, it will have served a very useful purpose, and have accomplished much good.

Expressing my regret for having trespassed to such an extent upon your valuable space,

I am, etc.,

(Sgd.) Oliver W. Lincoln.

#### OBITUARY.

ALFRED BOWLES, M.R.C.S.Eng., L.R.C.P.Lond., Ordinary Member of the Association since 1900.

THE death of Dr. Alfred Bowles occurred on December 21, 1925, at Eastbourne, where he had resided for the past twenty-five years. He undertook the care of both certified and voluntary patients in his house, and his results were highly successful. Possessed of dogged perseverance and of a cheerful disposition, his influence over patients was of a high order. Before settling at Eastbourne he had been a medical assistant at Moorcroft House for twenty-two years, and his practical experience of mental disorders was considerable. His work was characterized by conscientious thoroughness, and he gained the respect of everyone connected with him. He had been a member of the Royal Medico-Psychological Association for many years, and he was also a member of the British Medical Association and of the Eastbourne Medical Society. Of a retiring nature, he did not, however, frequent medical meetings, but nevertheless by diligent reading kept himself abreast of all modern medical developments. Dr. Bowles was educated at University College and St. Mary's Hospital. In earlier years he possessed a good baritone voice. He also cultivated hobbies, and was fond of mechanical inventions. His health, both physical and mental, continued good until he developed a cold a day or two before he died. Though he had reached the ripe old age of 84 he was active in his professional work to the day of his death, which took place suddenly from heart failure. Besides his widow, he leaves a son who is married, and a wide circle of friends to mourn his death.

J. F. S. HAY, M.B., C.M.Aberd., J.P., Inspector-General of Mental Hospitals for New Zealand.

We regret to announce the death of Dr. Frank Hay, who had been a member of the Association since 1890, which occurred on board S.S. "Rauhine" on September 5, 1925, during the voyage from Southampton to Wellington.

He had been seriously ill for the last two years, but stuck to his duties as long as possible, and left for home to recuperate early in July of last year. He was, however, not benefited in health by the trip, and his strength gradually faded on the voyage home, and he passed away as stated above.

Born at Lucknow, India, in 1867, the late Dr. Hay was educated privately at Blenheim House, Wimbledon, and Aberdeen University. He obtained his M.B. and C.M. degrees in 1890, and was appointed Assistant Medical Officer at the Murray Royal Asylum, Perth, in 1890, a position which he held until 1896. He came to New Zealand in 1897, and occupied the position of Physician Superintendent of the Ashburn Hall (Private) Mental Hospital from 1897 until 1904. He was appointed Deputy-Inspector-General of Mental Hospitals in 1904, and held the

position for two years, being promoted to the rank of Inspector-General in 1907, on the death of the late Dr. Duncan McGregor. He was a member of the National Provident Fund Board and Prisons Board. In 1923 he married Mary Stuart, daughter of the late Right Hon. R. J. Seddon and Mrs. Seddon.

After graduating, Dr. Hay devoted himself to the study, care and treatment of the insane, and made this his life's work, but there was never any narrow professionalism about him. The fact that he had a strong literary and artistic bent won him as a student and afterwards a wide circle of personal friends and admirers, both within and outside the medical profession. His acquaintance with and appreciation of Shakespeare and other classics was quite exceptional, and he showed great taste as a capable judge and connoisseur of good books, good pictures and artistic antiques of all kinds. However, it was his warm-hearted, bright, genial and singularly lovable personality that won Dr. Hay his many friends and an inner circle of lifelong intimates, by whom his death will be keenly felt. He was the soul of honour and loyalty, and his personal regard for the afflicted and desire for their welfare was as genuine as it was welcome. The patients and staffs of the mental hospitals have lost in Dr. Frank Hay a most sincere well-wisher and friend, and the Dominion a most devoted public servant.—September 7, 1925.

The funeral took place on September 8. A service was held at St. Paul's Pro-Cathedral, where there was a large attendance of representatives from all sections of the community, including the Hon. Sir Maui Pomare (Minister in Charge of Mental Hospitals), Hon. Sir R. Heaton Rhodes (Minister of Defence and Chairman of the National Provident Fund Board), Hon. C. E. Statham (Speaker, House of Representatives), Mr. F. D. Thomson (Private Secretary), representing the Prime Minister (the Hon. J. G. Coates), many members of Parliament, the official heads of Departments of the Public Service, members of the New Zealand Academy of Fine Arts, and practically all the members of the medical profession in Wellington. The Mental Hospitals Department was represented by Sir Truby King (Acting-Inspector-General), Dr. Prins (Deputy Inspector-General), Mr. G. C. Holden (Chief Accountant), and the members of the head office. Canon W. S. Bean, of Christ-church (brother-in-law), and the Ven. Archdeacon Johnson conducted the service at the Cathedral, and also at the crematorium at Karori.

[We are indebted to extracts from the *Dominion*, September 7 and 9, 1925, for these particulars.]

## Percival L. Langdon-Down, M.A., M.B., B.Ch.Camb., of Normansfield, Hampton Wick, Middlesex.

Sympathetic reference was made to the death of Dr. Percival Langdon-Down by the President and Dr. R. H. Cole at the Quarterly Meeting held on November 17, 1925, which is reported on p. 142, but there was not then the opportunity of relating his many activities, the cessation of which will be keenly felt in many circles.

Percival Langdon Langdon-Down was born in 1868 and educated at Harrow and Trinity College, Cambridge, where he qualified as M.B., B.Ch., in 1893.

He was at one time a House Surgeon and a House Physician at the London Hospital under Dr. Hughlings Jackson, who refers to him several times in his published works with appreciation. He afterwards entered general practice, but was much interested in psychiatry and joined the Association in 1902.

Since 1920 he had been closely associated with the medical work and management of Normansfield, Hampton Wick, Middlesex,

In public life he was a well-known and highly respected personage in the district in which he lived, but there were other interests which attracted him, in regard to which he from time to time held high civic posts.

He became a member of the Teddington Ūrban District Council in 1905, and was its Chairman 1907-08, 1914-20, 1923-24. He was Chairman of the Thames Valley Councils Association since its formation in 1914, a member of the Thames Conservancy since 1905, and Chairman of Richmond Bridge Committee. He did good service during the war as Chairman of the Food Control Committee. He was a Governor of Hampton Grammar School and Vice-Chairman of Teddington and Hampton Wick Cottage Hospital, and these by no means exhaust the number and character of his public activities, as to the value of which the testimony has been whole-hearted and from all quarters and parties.

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Perhaps even more marked was the esteem and affection with which he was regarded by his patients and their friends and relations.

He was a keen riversman and commodore of the Tamesa Sailing Club.

He married, in 1899, Helen, second daughter of the late James Bigwood, of Twickenham, and leaves a widow, two daughters and a son to mourn him, also a brother, Dr. Reginald Langdon-Down, of Normansfield.

JOHN R. LORD.

## ARTHUR FRANCIS REARDON, L.M.S.S.A.Lond.,

Medical Superintendent, Cambridge County Mental Hospital, Fulbourn.

News arrived, too late for comment at the November meeting, of the death, on November 2, 1925, at Addenbrooke's Hospital, of Dr. A. F. Reardon, who was taken suddenly ill on October 27, or sympathetic references to the sad event would have been made by the President and members present. Dr. Reardon became a member of the Association in 1921.

He was appointed Medical Superintendent at Fulbourn Mental Hospital in July, 1922, and was an efficient and popular man, working extremely hard for the welfare of all concerned in the institution, and there is no doubt that he will be greatly missed.

He came to the Cambridge in March, 1920, as an assistant medical officer under Dr. Archdale. He had come from the Isle of Wight Mental Hospital, where he had been since 1910, and previous to this he was an Assistant Medical Officer at Camberwell, and Senior Assistant Medical Officer of Darenth Industrial Colony, Dartford.

## Dr. JOSEPH BREUER, of Vienna.

THE name of Dr. Joseph Breuer, who has lately died (June, 1925) in his eightyfourth year, will be handed down to posterity as an intimate connecting link with the birth of psycho-analysis. He was an erudite physician with wide interests outside his professional work, and hand in hand with the duties of a large medical practice he devoted himself to important physiological work. His fame, however, will arise from the fact that it was he who initiated the "talking cure," or cathartic method of attacking hysteria, and first gave us an insight into the pathology of that neurosis which has proved of undying value. His well-known first clinical case, which has since been productive of so much discussion, is constantly quoted in psycho-analytical literature. It was at this period that Freud, fresh from his studies with Charcot, came in contact with Dr. Breuer, and became stimulated to develop what he learnt from him into the later theories which have since become of world-wide renown. It was not till fourteen years later (1895) that, after working together on the same lines, they published the epoch-making book, Studien über Hysterie, which, not only from the point of view of historical interest, can be read now by psycho-pathologists with interest and profit. It must be noted that Breuer's discoveries were entirely original, though this work appeared after the publication of some of Janet's researches. Little did Breuer dream of the enormous significance which his findings would eventually have for the development of mental medicine. This, however, is more or less true for all pioneers. It is interesting, too, to note that he did not care to develop his primary work on the interpretation of the neuroses, and, according to Freud, such investigation became repugnant to him. Fortunately, in Freud we have had a psychologist and physician who unceasingly has devoted the remaining years of his life to such work. C. STANFORD READ.

#### NOTICES BY THE REGISTRAR.

FINAL ENAMINATION RESULTS FOR THE NURSING CERTIFICATE, MAY, 1925.

List of Successful Candidates.

Those marked \* are " with distinction."

Bedford .- Kenny Pike, Albert Gentle.

Bucks.—James Goodson, James Thomas Selby.

Cambridge.—Hilda Jane Cornell, Mary Handley, Catherine Agnes MacAllister, William Lancaster, George William Turner, Fredk. Charles Duce, \*Arthur H. Merry.

Cheshire, Chester.—Patrick Joseph Bowen, Frederick Lanceley, Dorothy Fleet. Cheshire, Macclesfield.—Alice Winstanley, Edith Tomlinson, Hannah Allen, Annie McGurran, Louisa Careless, Edith Horton.

Cornwall.— Alan Eugene Luke, Anita Bertolucci, Ethel Newton, Blanche Jeffrey.

Cumberland.-Hannah Graydon, Eva Morton, Ina Sutherland, Moses Tyson.

Derby County .- Frank Bond, Ethel Armstrong, Alice Hunt.

Devon.—George Alan Northway, Laurence Henry Woolmington, Harry Vile, Lucy Mary Leonora Symons, John Glanville Whitton, Beatrice Emma Symons, Ernest George Goldsworthy, Edward John Keeffe.

Dorset.—Bartholomew Winter Hardwick, Leonard Leslie Garland, Rose Elizabeth Hurle, Frances Mabel Baker, Doris Evelyn Rattue, Daisy Parker, Annie Irene Shearing.

Durham .- James Richard Bentley.

Essex, Brentwood.—George Wm. Robert Bear, Harry Piggott, Alfred Rainbird, Alice J. Dickman, Margaret Carter, Gladys Hill, Maud C. L. Abbott, Dorothy H. Steele, Grace L. Sinfield.

Essex, Severalls.—Clarence Besford, George Joseph Bell, William Edward Cowper, \*William Henry Sheldrake Chatten, Arthur James Hughes, Ernest Phillips, Charles Henry Strutt, Elsie Monica Wilson, Eva Valerie Blandford, Alice Kate Cottee, Agnes Henderson Lennox, Evelyn Annic Jones, Doris Young, Edith Colebrook, Christina Harper, Ada Elizabeth Stait.

Glamorgan.—Walter H. Evans, Joseph Barnet, John Mohan, \*Myles V. Sinnot, William J. Hooper, P. O'Donnell, \*J. O'Donnell, F. Gerrard, Edward Jones, Griffiths J. Thomas, William Randall, John Gavin, Geo. Knight, Harry Raikes, \*Thomas G. Westcott, Mabel Brown, \*Annie Kent, Eva Hawthorne, Beatrice M. John

Hants, Knowle.—Samuel Akers, Albert Edward Woods, Dorothy Andrews, Mary Agnes Veronica Costello, Annie Dorothy Hyde, Daisy Stickland.

Hants, Park Prewett.—Arthur Seymour Jennings, William Foy, Albert Cecil Joyce, Emily Katherine Comer, Alice Maud Allen.

Hereford.-Edith Eyers, Laura Evelyn Jones, May Williams.

Herts, Hill End.—Joseph John Jackson, Charles Henry Spicer, Eva Alice Bird, Mabel Agnes Caton, Florence Rosaline Dugdale, Mary Elizabeth Green, Daisy Vera Nellie Lovell, Nora May Lynn, Gladys Stephenson.

Kent, Chartham.—Henry Herbert Barnett, Albert Edward Gull, Frederick James Mann, Harry Pilcher, Stephen Leonard Wilson, Frederick John Robbins, Kate Mary Hopley, Dorothy May Bailey, Mabel Goodall, Edith Annie May, Violet Florence Hillman, Gladys Kathleen Florence Moore.

Kent, Maidstone.—Mabel Helen Skelton, Annie Elizabeth Moody, Enid Geary, Eliza Jane Hodson.

Lancashire, Prestwich.—Margaret Charles, Cissie L. Cooper, Susan Young Bell, George Burgess, \*William E. Walker.

Lancashire, Rainhill.—Agnes Jane Adams, Selina Allsopp, Ellen Muriel Chamberlain, Norah Kathleen Clarke, Nellie Speed, Ernest Charman, Richard William Hughes, Edward Leavesley.

Lancashire, Whillingham.—Thomas Cain, Richard E. Prescott, Joseph Hogan, Reginald Milton, Thomas D. Pearson, Joseph Fliteroft, Herbert Rowe, Joseph Atkinson, Albert Cross, James Lea, Dora Robley, Hebe Tyldesley, Margaret Jones.

Lancashire, Winwick.—Edith Downey, Katherine Keenan, Elizabeth O'Brien.

Leicester Co.—Jesse Balderston, William Richardson Whittaker, William Mansfield, Bridget Mary Kearns.

Lincoln, Bracebridge.-Eric Trafford, C. H. Whydall, J. W. Darley.

London, Banstead.—Florence Esther Bailey, Hilda Rebecca Finlay, Dorothy Hubbard, Maude Tugwell, Jack Good, Wm. Henry Kingsbury, Henry John Rogers, Valentine Taylor, David Owen, Percival Tanton, Fredk. Charles Webb, Edward Osborne Bissett Johnson.

London, Bexley.—Francis Victor Leonard, Ernest James Whitington, Charles John Wildish, William Varndon Poole, Edith May Northover, Olive Stubbs, Mary Cairns, Edith Emily Haldorsen, Alice Lilian Boswell, \*Hilda Jane Peet, Ada

Beatrice Hart, Helen Robertson Sloan, Lilian Rose Faggetter.

London, Cane Hill.—Francis Cottam, Fredk. Norman John Hudson, John David Hunt, Herbert Merritt, Herbert John Silvester, Joseph Sidney Sales, Wm. Alfred Storkey, Orlando John Smale, Walter Wesson, Florence Jessic Aprile, Helen Elizabeth Burfield, Ellen Gladys Keeble, Ellen Mahedy, Ellen Olive Pacey, Lilian Mary Ryall, Dorothy Dean, Margaret Ryall, Harriet Scott, Esther Lilian Waller, Lily Victoria Junker, Daisy Amelia Philpot, Doris May Powell, Emily Ada Johnson, Gertrude Barker.

London, Claybury.—Elsie Hilda Bennett, Elsie Bodinham, Catherine Bergin, Edith Copeland Christie, Alice Gregory, Elsie Gregory, Vera Hahn, Annie May Mahoney, Rose Anna O'Brien, Phoebe Thomas, Reginald James Talbot, Fredk. Arthur Ellis, Charles Ewart Smith, Herbert Cornwell, Wilfred Charles Clark, Allan Ware, John Walter Francis, William Birch, Charles Summers, John William Taylor, Henry Sturges Woodey, Walter Godfrey, Alfred George Pudney, Arthur Alexander Mould, Joseph Stanley Reynolds.

London, Colney Hatch.—James Underwood Knighton, Henry Joseph Wordley, Robert Berridge, Willie Pedder, James Keenan, Edward Albert Thomas, Henry, or Wm. Edward Paull, James Twitchell, Henry Charles Sharp, Arthur Tyler, Chas. William Willis, William Arthur Blake, Charlotte Ellen Willoughby, Mildred Rose Grix, Lilian May Reeves, Ellen Wright, Katherine Annie Billimore, Dorothy Evans, Annie May Harrison, Mary Christina Davies, Grace Gordon, Ada Louisa Macdonald, \*Percy G. Roullier, Edward R. Douglas, Sidney Andrews, Herbert D. Trayhurn, William Edwards, Walter Lediard, Walter W. Johnson, \*Leo Thos. O. Hall, Arthur W. Argyle, Sidney G. Jones, Eva A. M. Fox, Mabel Smales, Sylvan M. Prickett, Hilda May Bradbrook, Florence M. B. Rosewarne, Caroline A. Clements, \*Florence M. Narramore, Louisa M. Flear, Elsie C. Ashford, Dorothy M. Thomas, Mabel E. Pennells, Beatrice S. Simmonds.

London, Ewell, M.O.P.—Thomas Forsey, John Matthew Starling.

London, Horton.—Winifred Gladys Walker, Dorothy Edith Edwards, Emma Prosser, Muriel Amy Oxley, \*Annie Major, Mary Edith Blackford, Mabel Meadmore. London, Long Grove.—Herbert Portwine, Herbert Edwin Albutt, Gerard Augustus Barttrum, James Richard Butcher, George Arthur Bradley, Herbert Claydon, Anthony Connor, Robert Cavin, Wm. John Calcutt, Wm. Fredk. Chapman, George Wm. Freeman, Albert George Heasman, Hilda Beale, Florence Alice Osborne, Edith Ellen Shrimpton, Lizzie Mary Williams.

London, Maudsley.—Mary Erskine Gilchrist Little, \*Clara Robinson, Francis Halligan, Florence Rickus, Jane Florence, Dorothy Harrison, Gladys Palmer,

\*Jessie King.

London, West Park, Epsom.—Fredk. James Mann, Frederick Sturgess, Joseph Clarence Hunt, Arthur Charles Jessup, William Henry Warburton.

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Belfast .- Robert Carson, Mary Laird, Eliza Jane McGarry.

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South Africa, Bloemfontein.—Johanna von Mollendorf, Charles Edward Apperley, Winifred Emma Sanders, Mary Catherine Jackson, Susan Louisa Vos.

South Africa, Grahamstown.—Maria Johanna Van Antwerpen, Nita Florence Mary Weldon, Carel Adam Buchner, Jacobus Frederick Van Niekerk, Gideon Johannes Van Niekerk.

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#### NURSING OF MENTAL DEFECTIVES CERTIFICATE.

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Stoneyetts Institution.-Marion Colquboun Allan, Rachel Smith.

South Africa, Alexandra Institution,-Adeline Myrtle Marincowitz.

#### NOTICES OF MEETINGS.

Quarterly General Meetings .- February 16, 1926; May 18, 1926.

South-Eastern Division.—April 1, 1926, at St. Andrew's Hospital, Northampton. South-Western Division.—April 29, 1926, at the Bristol City Mental Hospital, Fishponds; October 28, 1926, at the Hereford City and County Mental Hospital. Northern and Midland Division.—April, 1926, at the Gateshead Mental Hospital,

Northern and Midland Division.—April, 1926, at the Gateshead Mental Hospital Stannington.

stannington.

Irish Division .- April 22, 1926.

#### APPOINTMENTS.

BEDFORD, P. W. P., M.D.Edin., Deputy Medical Superintendent, Dorset County Mental Hospital, Herrison, near Dorchester.

BLAIR, DAVID, M.A., M.D.Glasg., Medical Superintendent, Lancashire Mental Hospital, Prestwich.

DRYDEN, A. M., M.B.Edin., Medical Superintendent, Glasgow District Mental Hospital, Gartloch, Gartcosh.

JONES, HY. TRAVERS, M.B., B.S., Medical Superintendent, Cambridgeshire Mental Hospital, Fulbourn.

LILLY, G. A., M.C., M.A., M.D.Camb., Deputy Medical Superintendent, London County Mental Hospital, Banstead, Surrey.

MARTIN, J. C., L.R.C.S.&P.Irel., Medical Superintendent, District Mental Hospital, Letterkenny, Donegal.

MASEFIELD, W. G., M.R.C.S., L.R.C.P., Medical Superintendent, Essex County Mental Hospital, Brentwood.

NORMAN, HUBERT J., M.B.Edin., Medical Superintendent, Camberwell House, London, S.E. 5.

O'NEILL, A., O.B.E., M.R.C.S., L.R.C.P., Medical Superintendent, Napsbury Mental Hospital, St. Albans, Herts.

Petrie, A. A. W., M.D., M.R.C.P., D.P.M., Medical Superintendent, London County Mental Hospital, Banstead, Surrey.

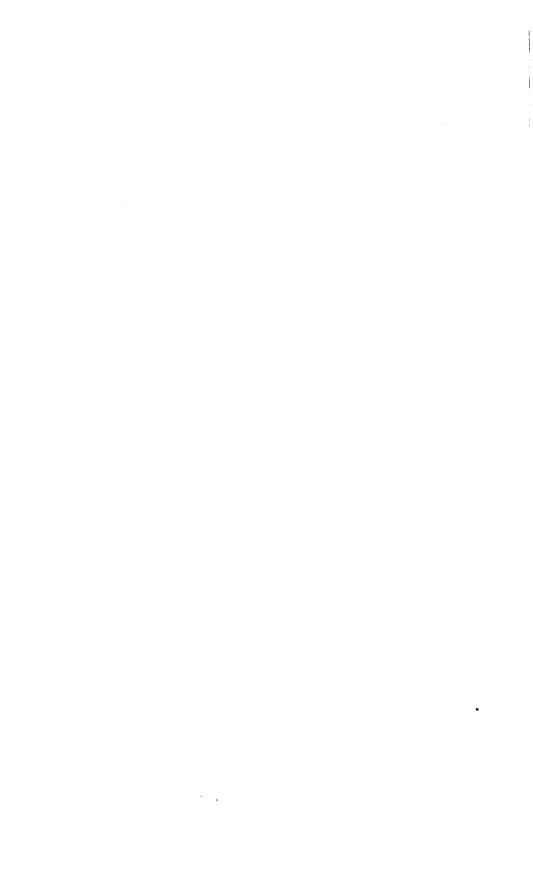
ROBINSON, W., M.D., Medical Superintendent, City of London Mental Hospital, Stone, Dartford.

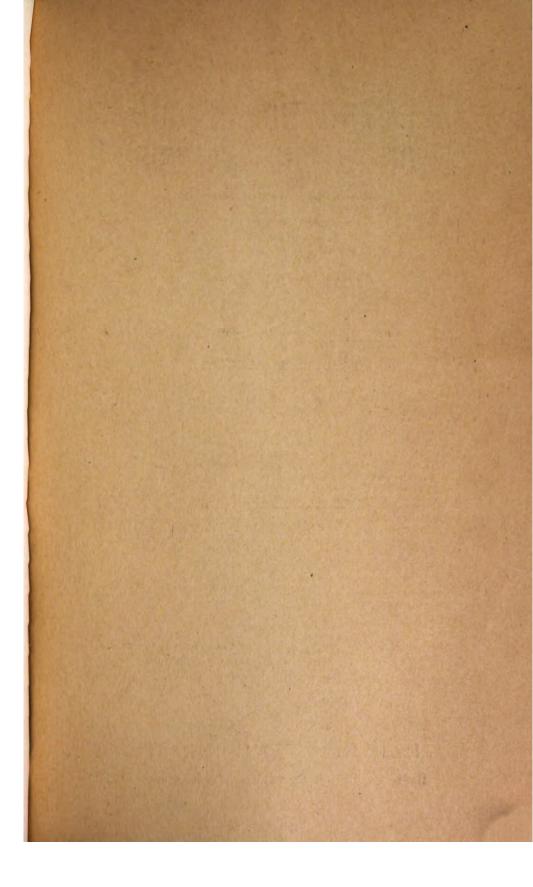
RUSSELL, J. I., M.B., F.R.C.P.S.Glasg., Medical Superintendent, North Riding Asylum, Clifton.

RUTHERFORD, H. R. C., F.R.C.S., L.R.C.P.Irel., Medical Superintendent, Farnham House, Finglas, co. Dublin.

SMITH, HERBERT, M.R.C.S., L.R.C.P., Deputy Medical Superintendent, City Mental Hospital, Fishponds, Bristol.

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# THE JOURNAL

OF

JUL 1 1926

# MENTAL SCIENCE.

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Published Quarterly, price Seven Shillings and Sixpence net; or Thirty Shillings per annum net. The following Mental Hospital Reports for the year 1925 have been received: Aberdeen Royal.

Edinburgh Royal.

Maudsley.

Also the following Reports and Reprints:

Northern Ireland: The 3rd Report of Inspectors of Lunatics for 1924. Victoria: Report of the Inspector-General of the Insane for 1924.

Federated Malay States: Annual Medical Report for 1924.

Butler Hospital, Providence, R.I., Annual Report for 1925.

American Association for the Study of the Feeble-Minded: Proceedings, etc., at Annual Session, 1925.

New York City: Report of a Mental Health Survey by National Committee for Mental Hygiene, 1925.

The Besford Court Catholic Mental Welfare Hospital for Children, 8th

Annual Report, 1924-25.

Erythrocytosis in Artificially Inoculated Malaria, by Dr. G. de M. Rudolf. Reperli emoparassitarii e malariologici nella cura della paralisi generale progressiva con la malaria, by Giovanni Bravetta.

What happens to Patients with Mental Disease during the First Year of

Hospital Life? by Dr. H. M. Pollock. Mental Diseases among Negroes in the United States, by Dr. H. M. Pollock.

Outcome of Mental Diseases in the United States, by Dr. H. M. Pollock. The Morbid Anatomy and Histology of Pellagra, by Dr. W. Susman.

The Voluntary Mental Patient, by Dr. Norman R. Phillips.

Biological Therapy, issued by Parke, Davis & Co.

The Smithsonian Institution Annual Reports for 1923 and 1924.

Books received for review:

Social Psychology, by Knight Dunlap.

Experimental Psychology, Part II, by Prof. C. S. Meyer and F. C. Bartlett, M.A.

Mental Invalids, by Dr. C. C. Easterbrook.

Intelligence and Immigration, by Dr. C. Kirkpatrick.

Hysteria, by Dr. Ernst Kretschmer.

Mind: Its Origin and Goal, by Dr. G. B. Cutten.

Essays in Psycho-pathology, by Dr. William A. White.

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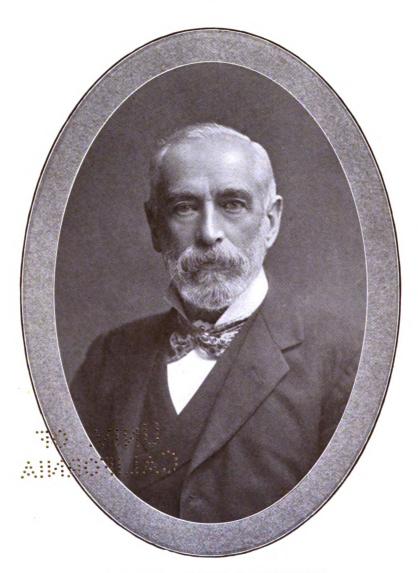
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Co-Editor of the Journal 1895-1911.

#### THE

## JOURNAL OF MENTAL SCIENCE

[Published by Authority of the Royal Medico-Psychological Association.]

No. 297 [NEW SERIES]

APRIL, 1926.

VOL. LXXII.

### HENRY RAYNER, M.D.ABERD., M.R.C.P.EDIN.

By the death of Dr. Henry Rayner our Association has lost one of its oldest and most esteemed members, who had done great service to it and to the cause of the insane.

His medical career began at Hythe, where he was apprenticed to the local medical practitioner, as was customary in those days. He entered as a student at St. Thomas's Hospital in 1861, when the hospital had moved to Surrey Gardens from the Borough. In 1862 he gained the 1st College Prize as a first-year student, and was again awarded the 1st College Prize in his second year, and in 1864 he competed for the Cheselden Medal in Surgery and was awarded a Certificate of Honour.

He qualified as M.R.C.S. and L.S.A. in 1864, and he held the post of Resident Accoucheur at St. Thomas's in 1865. He then proceeded to Aberdeen, where in 1866 he took the degrees of M.B. and C.M. "with highest academical honours." He subsequently proceeded to M.D. in 1870, and M.R.C.P.Edin. in 1878.

In 1867, while working at the Dispensary, Upper Street, Islington, he appears to have caught diphtheria, which led to some ocular paralysis, and on going to Aberdeen to recruit he and some friends imprudently waded the Dee in mid-winter, which led to loss of power in his legs, from which, however, he completely recovered.

In 1870 he first entered our special branch of medicine, being appointed Assistant Medical Officer to Bethlem Hospital, of which at that time Dr. Rhys Williams was Resident Physician and Superintendent. He remained at Bethlem Hospital for two years, and then was appointed in 1872 Medical Superintendent of the male side of Hanwell Asylum, which was then under the management of the Middlesex magistrates. His successor at Bethlem Hospital was the late Sir George Savage. At Hanwell he was associated

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with Dr. Richards, who was in charge of the female side. His predecessor was Dr. Begley, who had been appointed in 1838.

In 1878, when Dr. Rhys Williams was appointed Commissioner in Lunacy and resigned the Lectureship in Mental Diseases at St. Thomas's Hospital, Dr. Rayner was elected to succeed him in the latter post, which he retained till 1905. Before this he had held a similar appointment at the Middlesex Hospital.

He continued as Medical Superintendent at Hanwell until his resignation in 1888. At Hanwell he set himself to improve the conditions under which the insane were cared for. I am told that one of his first acts was to have the bars removed from windows, and this in spite of the protest of the Committee that it would largely increase the bill for broken glass, but within a short time only an occasional new pane was required, in contrast to the former heavy bills for broken glass. He was in favour of improved attention to general health, cultivation of regular habits, increase of bodily exercise, reasoning with patients and strengthening their will-power. He had a strong dislike to the use of sedatives and narcotics, believed in the use of Turkish baths in selected cases, and was interested in the effect of rooms painted in various colours on different types of insanity.

The Reports of the Commissioners in Lunacy show that in 1889 Hanwell had a lower death-rate than any other county or borough asylum in England and Wales, and the recovery-rate for the five years 1884–88 shows 45% on admissions for Hanwell, as compared with an average of 40% for all asylums.

His name first appears in the List of Members of the Medico-Psychological Association in vol. xvi, January number, 1871, of the Journal of Mental Science, when he was at Bethlem Hospital. The first paper recorded in the Journal was one read at a meeting of the Association on March 27, 1875, on a "Case of Opium-taking," with rapid recovery on cessation of the drug. In vol. xxvi is a paper on "Lead-poisoning and Insanity," read at the quarterly meeting, February 25, 1880, and in vol. xxvii is a digest of a paper read at the International Medical Congress, London, 1881, on "Gout as associated with Insanity." These two subjects are further elaborated in the articles he wrote in Tuke's Dictionary of Psychological Medicine on "Gout and Insanity" and "Mental Disorder from Lead-poisoning." In vol. xxix (1883) is a paper on "The Relative Cost of Large and Small Asylums," in which occurs the following sentence:

"Every available argument should be used to prevent the building of large receptacles for dementia, or the enlargement of asylums of manageable size, by which there is a danger of diminishing the 'individual and responsible treatment of the insane' on which so much of their welfare depends."

While at Hanwell he had become General Secretary of our Association in 1877, and held the post till 1889.

In 1884 he became President, undertaking the office at short notice on account of the sudden illness of Dr. Manley, who had been President-Elect. His Presidential Address, July 23, 1884, at the Annual Meeting held at the Royal College of Physicians, London, was largely concerned with the consolidation and amendment of the Lunacy Laws, which was then proposed by the Government. In it he objected to the proposed abolition of private asylums, referred to the need of public institutions for those only able to pay small fees, called attention to the prejudice against certification and to the fear of litigation, referred to the proposal to introduce the magistrate to private cases, and emphasized the need for increase in the personnel of the Board of Control and for a Ministry of Public Health. He also referred to diet scales and the training of attendants. Some of these are still burning questions. subsequently, as President of the Association, headed a deputation to the Lord Chancellor criticizing the proposed alterations in the Lunacy Laws.

In vol. xxx of the Journal of Mental Science he reported a case of insanity after head injury. In vol. xxxv (1889) is the report of the discussion on Dr. Hayes Newington's Presidential Address on the "Hospital Treatment for Recent and Curable Cases of Insanity." In this Dr. Rayner took part, expressing the view that the general hospitals gravely neglected their duty in totally refusing to receive insane cases of any kind unless accidentally admitted. He said, "I believe it can be done satisfactorily on a small scale by making proper and due arrangements."

He had by this time left Hanwell Asylum, and had entered into consulting practice, residing at Hampstead. He continued to hold the post of Lecturer on Mental Diseases at St. Thomas's Hospital. Shortly after this he convinced the Governors of St. Thomas's Hospital that it was desirable to open an out-patient department for early mental cases. In 1889 he became a Governor of Bethlem Hospital, and was a member of the General Committee for many years.

At the Annual Meeting of the British Medical Association, held at Newcastle, 1893 (Journ. Ment. Sci., vol. xxxix, p. 612), he read "Remarks on the Out-patient Department for Mental Diseases at St. Thomas's Hospital." He referred to the fact that in a letter to The Times some ten years before he had drawn attention to the fact that general hospitals took no part in the treatment of mental

disease. His remarks on the subject are worthy of quotation, and it may be said that he was the pioneer in this work, as there are now similar out-patient departments at Charing Cross, Guy's, St. Bartholomew's, Middlesex and St. Mary's Hospitals, as well as at Bethlem Hospital and the Maudsley Hospital.

"The direct work of the out-patient department is not only to treat the cases suitable for treatment, but to relegate into proper channels those requiring change of air, hospital, infirmary or asylum care. The indirect advantages are the removal from the popular mind that mental disease is something apart from all other disease, and the bringing of the alienist physician into more continual contact with the rest of the profession, thereby breaking down the isolation of alienism which has hitherto existed."

At the Annual Meeting of the British Medical Association, London, 1895, Rayner opened a discussion "On the Treatment of Melancholia" (Brit. Med. Journ., September 28, 1895). The prophylactic as well as the curative treatment is fully discussed in the paper. His dislike to sedatives and narcotics is emphasized, and stress laid on physical improvement and personal treatment. He also wrote the article on "Melancholia and Hypochondriasis" in Allbutt's System of Medicine, 1899.

At the Annual Meeting of the British Medical Association at Carlisle, July, 1896, he opened a discussion on the certification of insanity in its relation to the medical profession, and moved a. resolution, unanimously agreed to, that the Council of the British Medical Association "should consider the desirability of obtaining for England and Wales some provision for the temporary care of incipient and non-confirmed insanity similar to that which exists under the Scottish Lunacy Act." This was before the large increase of voluntary admissions to mental hospitals which has taken place. He referred to the dislike of practitioners to run the risks of certification and to the small protection to them, and also to the detrimental effect of certifying short cases which quickly recover. His interest in the early treatment of cases and in psychiatric clinics is further shown by his letters to the Lancet (1902, i, p. 773) on the psychiatric clinic, in which he refers to the department at St. Thomas's Hospital, and (1914, i, p. 470) against the treatment of early cases being legalized to unskilled persons.

In 1895 he had become Co-Editor of the Journal of Mental Science, and continued to act in that capacity until 1911. In vol. xliii, p. 517, is a paper by him on "Housing the Insane," calling attention to the need for "skilled individual attention" as the basis of treatment. He wished to see receiving-houses, mental.

infirmaries or wards, affiliated if possible with the general hospitals and infirmaries, staffed by alienists with the assistance of the hospital specialists. He summarized the line of advance in treatment as a "need for more brains and fewer bricks." This paper was fully discussed at a meeting of our Association.

In vol. xlviii, 1902, p. 460, is a paper read by him before the Association on "Sleep in Relation to Narcotics in the Treatment of Mental Disease." In this he expressed his aversion to the continued use of chloral and sulphonal or other narcotics, and summarized his experience as follows: "I have therefore come to the conclusion, and this I have now carried out in practice for many years, that with very rare exceptions—so rare that in as many years I could probably count the doses on the fingers of one hand—narcotics can be avoided with advantage."

In vol. 1, p. 473, 1904, is a reprint of a paper written for the Charity Organization Society of Glasgow on the "Need of Care of the Weak-minded in Infancy and Childhood." He found that a considerable number of such cases were brought or sent by charitable associations to his out-patient department at St. Thomas's Hospital. He stressed the need for special advice and nursing and special attention to general health and nutrition during infancy and early childhood, so as to fit such children for deriving benefit from the schools for the feeble-minded or the special classes for backward children.

In 1888, while still at Hanwell, he had also read a paper before the Council of the Charity Organization Society on "The Treatment of the Feeble-minded and Epileptic." He also read a paper before the Childhood Society on "The Early Recognition and Treatment of Mental Defects in Children."

In 1905 he retired from the post of Physician to the Out-patient Department at St. Thomas's Hospital and the Lectureship on Mental Diseases, and about this time also retired from consulting practice. He, however, continued to make contributions to medical literature from time to time. In the Journal of Mental Science, 1914, p. 572, is a paper by him on "The Wet Pack in the Treatment of Insomnia and Mental Disorders," referring to its use by Boyd at the Somerset Asylum in 1862, where opiates had failed to produce sleep, and also to its use by Lockhart Robertson (Journ. Ment. Sci., vol. vii, p. 261). He fully discussed the pros and cons of its use, and had himself found it useful in acute delirious mania of sthenic type and in insomnia of mental disorder associated with toxic conditions. He considered it "one of the most important and valuable means of treatment of the insane," and lamented that its vanished employment was due to its being classed by the Lunacy Commissioners as mechanical restraint.

In the Journal of Mental Science, vol. lxvii, 1921, p. 151, is a long philosophical article on "Temperament," with references to numerous authors from Galen downwards. He concluded that temperaments are due to somatic elements, "not inevitably inherited, but modifiable by protracted variations of nutrition within the limits of normality either during gestation or in after life." Reference may be also made here to an article on "Insane Diathesis," contributed to Tuke's Dictionary of Psychological Medicine. The last article of which I can find record is the one printed in the Journal of Mental Science, July, 1924, p. 358, on "Mental After-care."

The After-Care Association for poor persons recovered or convalescent from mental illness is very familiar to those practising in mental medicine, but as Dr. Rayner was the last survivor of the original founders, a few words of its history may not be out of place. This Association was begun in 1879 by the late Rev. H. Hawkins, who for some time was Chaplain of the Sussex County Asylum, Hayward's Heath, and afterwards for many years at the London County Asylum, Colney Hatch. It began work in 1886, the late Dr. Hack Tuke being its first Chairman.

In a letter which the writer received from Dr. Rayner shortly before his death, and written as recently as January 20, 1926, he stated that he and Dr. Hack Tuke originally attended a parlour meeting at Mr. Hawkins's house at Colney Hatch, to form a society of ladies to visit and befriend women in the asylum. Dr. Rayner strongly urged its extension to patients leaving, as he had had experience of the difficulty in starting patients in life again. It would appear that from about 1886 the Association began work for discharged patients, at first for women only. In 1891 Dr. Rayner read a paper before the After-Care Association on "After-Care of Male Patients discharged from Asylums." This will be found in the Journal of Mental Science, vol. xxxvii, 1891, p. 585.

The result was the extension of the work to the assistance of both male and female recovered patients, which has now reached large proportions. Dr. Rayner became Treasurer in the early days with Dr. Hack Tuke as Chairman, and on the death of the latter Dr. Rayner succeeded him as Chairman, with the late Sir George (then Dr.) Savage as Treasurer.

Dr. Rayner became Chairman of the Council in 1895, and so had completed 30 years of this beneficent work, when, to the great regret of the members, failing health prevented him from attending the meetings of Council, which he had always done with unfailing regularity. He only resigned the chairmanship in January of this year. Having retired from practice in 1906, he was able to devote

much time and thought to this work, and was able through influential friends to obtain the consent of His Royal Highness the Prince of Wales to be Patron of the Association, in succession to the late Princess Christian. His Majesty the King also gave £100 to the funds of the Association. He was also largely instrumental in persuading Sir Charles Wakefield, whose munificence to the Association is present in all our minds, to become its President. may be said that the work was very near his heart, and he always hoped that it would be extended further than simply to patients discharged as recovered. Without referring in detail to the paper on "Mental After-care." which reviewed the work already done. it may be pointed out that he considered that "mental aftercare" taken in its widest sense should include help to all persons discharged under any conditions from mental hospitals, or who needed assistance after having been under any form of treatment for mental disorder elsewhere. He favoured divisional branches in relation to the Divisions of the Medico-Psychological Association, supported by contributions from local committees and private donations and affiliated to the Central Association. As a proof of his desire for the welfare of this charity to the last is the fact that only five days before his death he wrote to the Secretary enclosing a cheque for £500 to the funds of the Association.

Among minor contributions may be mentioned a letter to *The Inquirer*, January 13, 1886, on "Compulsory Vaccination," an article on "The Care and Nursing of the Insane" (*Nursing Notes*, April 1 and May 1, 1888), and a paper in the *Lancet* (1916, vol., ii, p. 196) on "A Serious Defect in some of the Registered Hospitals for the Insane." This referred to the failure of the more expensive registered hospitals to give charitable assistance to those not well off while taking expensive patients. He also wrote to the *British Medical Journal* (1918, vol. i, p. 86) on "Painless Childbirth," criticizing scopolamine-morphine narcosis in childbirth, and the results to the mother, and especially to the child.

During the late war Dr. Rayner was on the Committee of the "Recuperative Hostels" for sailors and soldiers invalided from the services with nerve-strain, at first at Fitzjohn's Avenue, Hampstead, and afterwards at Marshall's Park, Romford. Sir Frederick Milner writes: "From the beginning to the end Dr. Rayner was one of our most energetic consultants and one of our most constant and helpful supporters. Everybody loved him, and he rendered most valuable service all through on our Committee."

He was for many years Chairman of the Infant Welfare Committee and the Joint Tuberculosis Committee of Hampstead, and was one of the Consulting Physicians to the Clinic for Early Nervous

Diseases, and was unsparing in work and in contributions to the funds.

He was a corresponding member of the Societa Freniatrica Italiana and of the Société Medico-Psychologique de Paris.

Of late years his time was spent between his residences at Hampstead and Hythe. He continued to take an active part in the management of Bailbrook House, Bath, and Fenstanton, Streatham, until late in 1925.

#### PERSONAL.

Henry Rayner was born November 7, 1841. He belonged to a family the members of which had always shown a strong sense of civic responsibility. An ancestor was Mayor of Colchester and obtained freedom of the famous oyster fisheries. His great-grandfather moved to Charing in Kent, and was a successful lawyer. His grandfather moved to Hythe, and his father became Mayor and J.P., and was owner of coasting steamers.

Henry Rayner was the youngest of ten children, and was born at Hythe when his father was 56 years of age. Living at Hythe, it is not surprising that he had a great liking for sailing. I am informed that when he was a boy one of his favourite holiday expeditions was to sail out to a light-ship in the Channel with bundles of old newspapers, for which he and his friend had a great welcome from the crew. He was always strong and hardy as a young man, and he afterwards delighted in the memory of having gone up Snowdon twice before 10 a.m., first to see the sunrise, and the second time with friends.

Dr. W. J. Sheppard, a former student of St. Thomas's Hospital, tells me that he has very pleasant memories of a sailing expedition to the Belgian and Dutch coast with Rayner and Mr. W. W. Wagstaff, formerly surgeon to St. Thomas's. He was an early volunteer and a good shot. He was a lover of vigorous exercise, used to cycle regularly up and down from Hampstead to his consulting room after leaving Hanwell, and continued playing lawn tennis regularly till he was 56, when he sustained a fracture of the leg. On recovering he took up golf, which he played regularly at Hampstead and Hythe, was a winner of many prizes, and went on playing a little till the last year of his life.

He was keenly interested in botany and geology, archæology and general literature. His daughter tells me that he would read aloud to his family with the greatest enjoyment, in this way going through all Scott's novels and other English classics. He was an ardent admirer of Gilbert and Sullivan's operas.

I have set out these details, as they seem to me to illustrate a

personal side of his life which was perhaps little known to those of us whose acquaintance with him was chiefly professional.

His portrait, by H. S. Tuke, was in the Royal Academy in 1900.

A small book, *Pain: its Place in Creation*, published by Adlard & Son, 1908, written by him, concludes with the following sentence:

"In the actual creation in which we exist, the presence of pain would appear to render it necessary to the establishment of the belief in the justice of the Creator, to believe in His immanence in man, and this would seem to be a fitting final revelation of the 'Mystery of Pain.'"

He married in 1882 Miss Field, and his widow survives him. His sons, Arthur Errington Rayner and Edwin Cromwell Rayner, are both members of the medical profession. To his daughter, Mrs. Matheson, the writer is much indebted for many details of his life.

He died rather suddenly at Hythe on February 8, 1926, in his 85th year, and was buried at Saltwood, near Hythe.

A very gentle, courteous and considerate physician has passed from our midst, one who threw himself into his work with constant diligence, and with a single eye to doing his best for the alleviation of the sufferings of the insane, to which he devoted himself almost to his last hour.

R. Percy Smith.

### Part I.—Original Articles.

The Affective States in Lilliputian Hallucinations (1). By RAOUL LEROY, Physician, State Asylums of the Department of the Seine, France.

OF all the physical phenomena which interest philosophers and psychiatrists there are none more interesting than hallucinations. Psycho-sensory disorder is a complex aggregate in which the psyche in its entirety is mingled with organic disorders, an association which is still a mystery to us. The study of the affective states in the hallucinated is, therefore, of the highest importance, since it allows us to bring psychic and physiological disorders

(1) In a paper read at the Spring Meeting of the South-Eastern Division, May 2, 1922 (vide Journ. Ment. Sci., July, 1922), my colleague and friend, Dr. G. W. B. James, very kindly made known in England a syndrome, studied by myself, under the name of "Lilliputian Hallucinations." These psycho-sensory disorders, particularly frequent in alcoholism, have been the subject in France of an important bibliography. I believe that they are but meagrely studied in the land of Gulliver's creator. That is why I am presuming to return to this subject, considered from another point of view.

together in their reciprocal relations. "The hallucination," says Hesnard, "which has always for the patient a personal affective significance more or less distinct, is only the symbolical translation, in comparison with a normal perception, of an interior positive psychic fact, of an affective productivity."

In order to examine the relationship of the affective state with hallucinations, I shall take as an example Lilliputian hallucinations, for this variety offers precisely an emotional tone and particulars which allow us to deduce some useful criteria. We shall see how the objective image behaves and how it varies with the affective state.

The affective state nowadays is of such importance that it may be considered the basis of normal and pathological psychology. It constitutes the study of the perplexing relationship of the physical and moral. In his *Traite des Passions* Descartes had already pointed out the influence of the organism in the genesis of the emotions.

Malebranche, in 1674, in his celebrated work, De la Recherche de la Vérité, by an intuition of genius foresaw the true chain of facts. The works of contemporary philosophers and physiologists have shown the primordial rôle of the sympathetic system. This system, by its correlation with the humoral equilibrium, "regulates the inmost recesses of the human being." As M. Laignel-Lavastine shows in La Pathologie du Sympathique, it constitutes, with the endocrine glands, which are closely bound up with it, the affective foundation of physical life.

The organic state conditions the affective state; the sentiments cannot exist without an organic substratum. Furthermore, the intellectual phenomenon is secondary. "Pain, considered as a psychical event, as an interior occurrence, as a simple state of conscience, is not a cause, but a symptom. The cause is a stimulus which, coming from an outside source, acts on the external senses, or, coming from within, acts on the organic sense. It is an error to consider pain and pleasure as the fundamental elements of affective life; they are only indications; the essential fact is elsewhere. What would one say of a doctor who confounded the symptoms of a disease with its essential nature?"(\*)

Thus, joy, pain, anxiety, fear, only exist if an impression, an idea, a moral or physical shock has provoked specific reactions in the organism.

In applying such data to visual hallucinations, it is easy to understand why the syndrome studied by myself had passed so long unnoticed. In alcoholism, notably, authors only speak of fears, zoopsies and terrifying visions. It is because these are by far the

most frequent in toxic delirium, that the pathological disorders produced by the poison cause more often a painful state.

It is not always so, and what we now know of Lilliputian hallucinations shows us the existence of peculiar visions very different, where not only all anxiety is absent, but where the subject shows himself transported with pleasure.

#### PLEASANT LILLIPUTIAN HALLUCINATIONS.

I have insisted on the affective state concomitant with these small hallucinations, in giving as an essential characteristic that they were accompanied—as a general rule and in typical cases—by a feeling of amused surprise, of liveliness. Prof. Dupré, in one of his latest clinical lectures, presenting new observations, emphasized this charm and this absence of anxiety.

This singularity had not passed unnoticed, and, among the rare cases of dwarf hallucinations that one meets with here and there in the old French authors, one finds striking examples of it (Brierre de Boismon).

The first patient whom I observed was a general paralytic, who, in the midst of an hallucinatory delirium following a seizure, saw some soldiers from 10 to 18 centimetres high file by in close battalions, some little fellows dressed in gaudy colours run about on the mantlepiece, hide behind photograph frames, and mount a Sedan chair (an ornament on the mantlepiece), some small dancing dolls, and some small cyclists pedalling around the bedroom. The patient, under the influence of this vision, was in a truly radiant state. He followed with his eyes the gambols of these small personages, laughing heartily, and trying to seize the small bicycles in order to give them as toys to a young nephew. He laughed the following morning in recalling the scene. This joy has been noted in the majority of observations. Here is an example taken from MM. Dupouy and Bonhomme:

"Another patient, after a period of restless delirium caused by an abuse of white wine, sees, on the walls of her bedroom, now some small dancing girls, now a filing past of small personages a few centimetres high, clothed and riding on bicycles. They seemed to come out of the wall and sped away gracefully on their machines along the wall-paper and hangings, going up and down as though they were following the rising of a hill or the hollow of a valley. They amused the patient, whose anæsthesic state was bordering on euphoria, very different from the feeling of terror which invades certain alcoholics terrified at seeing wild animals, often larger than in nature, rise up in their bedrooms."

It is not only in the hallucinated that such a fact is met with; the same pleasing affective state exists also in *Lilliputian dreams*—dreams which deserve a special study. A former medical student of mine, M. Fassou, has published a very fine case of a Lilliputian dream in an alcoholic. During his sleep the subject found himself

scated in a railway compartment looking out of the window. Suddenly he saw a crowd of small folk, the height of his finger, running about in every direction, shouting, kicking a ball about as large as a nut. They were wearing clothes of varied colours, blue, red, but above all greyish-green. At the first stop of the train about twenty of these small personages got on to the footboard of the carriage and gave themselves up to all kinds of acrobatics; one would have thought they were clowns. This scene was very amusing.

According to our knowledge of the physiology of emotion, it is certain that these pleasant visual hallucinations owe their existence to a particular sympathetic factor corresponding to joy. A number of observations concerning general paralytics have been published, and MM. Klippel and Dumas have shown "that joy in general paralytics is accompanied by cardiac hypotension and peripheral dilatation."

This statement has its importance. We will even go further. We can provoke experimentally dwarf hallucinations with their characteristic of liveliness by using alkaloids, whose physiological actions are brilliance of the eyes, mydriasis, coloration of the face, slackening of the pulse (sympathetic factors).

There is the "Peyotl," a sacred plant that the natives of Mexico venerate as a divinity, and to which they offer a particular and complicated worship. According to the works of M. Rouhier, the absorption of this intoxicating substance produces a general and pleasing excitement, feelings of lightness, muscular power, euphoria, exhilaration even, then visions of incomparable beauty.

Amid these oneiric phenomena one very frequently meets with typical coloured Lilliputian hallucinations. These facts are of important interest in the relationship of the affective state and hallucinations. The same phenomena are observed with the "Yagé."

It would be interesting to examine from the physiological point of view the subjects presenting these psycho-sensorial disorders. Let us recall that Dumas, having observed an hysterical person subject to intense erotic hallucinations, noticed during the hallucination of three minutes' duration that the pulse increased from 76 to 104, the arterial tension from 11 to 18, and the breathing increased to 48.

# PLEASANT LILLIPUTIAN HALLUCINATIONS PRECEDED OR FOLLOWED BY ORDINARY TERRIFYING VISIONS.

Curiously enough, it is fairly frequent to see the most typical Lilliputian hallucinations preceded or followed by ordinary terrifying visions. MM. Colin and Cénac have recently given an example of it in an alcoholic:

"I saw, during several consecutive nights," he said, "some Senegalese, 20 centimetres high, appear before my eyes, on the walls and floor of my bedroom; they filed before me as though they were manœuvring. There were about thirty of them, dressed like soldiers with horizon-blue coats and a red fez. There were also several Russians of the same dimensions, with their riding-boots, their wide breeches, their coloured shirts, astrakhan hats, and who danced. The spectacle lasted from ten minutes to a quarter of an hour and amused me." Before or after these dwarf hallucinations the patient had had ordinary zooptic hallucinations, with their terrifying character: Toads, lizards, tigers, grinning faces, etc.

Here even, in the admission unit, Maxime S— has had new microscopic hallu-

cinations. He has seen "little men and little women from 20 to 28 centimetres high, dressed like Bretons, the men in costumes of velvet, big hats, red and blue belts, the women with short skirts, green or red pinafores. There were also many children-about fifty-about 5 centimetres high, dressed in bright colours. All this little world walked and danced in a ring."

It was a real Lilliputian vision which lasted for ten minutes. The affective character was frankly pleasing.

Maxime S- was born in Paris, but he lived for two years, about 1901, in Brittany during the time of his military service. He passed nearly three years in Senegal (1903-1906) as a soldier, and he returned to this colony from 1916-1918, where he carried out the functions of a sergeant-major. Finally the patient related spontaneously that in a music-hall in Paris, before the war, he saw some Russian singers dressed like his Lilliputians. This is a fact of importance, and explains the genesis of his hallucinations.

This observation admirably shows in relief the opposition existing between the two affective states and the corresponding visual hallucinations. A happy emotion is accompanied by a charming vision; small people and soldiers dressed in bright colours. dancing and marching. The subject contemplates with joy this minute vision, which amuses him. What a difference from the toads and the grinning faces, the sight of which fills him with terror! Such a change is effected within the space of a few hours. The fact is easily explained if one considers that in dream-delirium, as in dreams, the most varied impressions may follow each other, and that new settings are produced rapidly and suddenly. in dreams is an unstable quantity.

This variation depends on certain fluctuations of the organic life, on a humoral imbalance, diffuse and complex, which changes form and acts upon the excitability of the neuro-vegetative system. The manic-depressive psychosis offers us similar examples.

Let us note in passing how the patient explains the genesis of his hallucinations—an explanation which corroborates the psychological theory that I have developed with Mignard. The alcoholic relates spontaneously the previous recollections of his life which have given birth to the visions, but he sought for a long time before finding the reasons of his dream-delirium, thus confirming the fine remark of Halbrachs: "This time it is no longer our mind that gives the call to remembrance; it is remembrance which calls to us, which urges us to recognize it and reproaches us with having forgotten it."

# RAPID ALTERNATION OF PLEASANT AND UNPLEASANT LILLIPUTIAN HALLUCINATIONS.

Psychic phenomena are so complex that one may see the affective state vary not only from hour to hour, but also almost instantaneously. I shall give as an example the fine observation of M. Salomon:

On the morning of the third day of his facial erysipelas, the patient was astounded at seeing, on his table, situated some distance from the foot of his bed, a very little man and a very little woman, who seemed to be watching him with interest. Puzzled, the young man contemplated them with curiosity. They were about 28 centimetres high, were dressed in gaudy coloured clothes, the ground-colour of which was yellowish. Our patient at first was very troubled by their presence; then he derived pleasure in watching them. "They kept me company the whole day," he said in the evening.

These small personages stood out in relief, in the midst of the objects in the room,

These small personages stood out in relief, in the midst of the objects in the room, which seemed familiar to them and which they used in their evolutions. Thus they hid behind a basin, and by means of a chair placed near the table they assisted themselves on to the table, they looked to see what there was in a cup. The Lilliputians came and went as though they were doing their house-work, spoke to each other without one being able to hear their words; they stopped frequently to look at the patient, who appeared to perplex them very much. The woman, fearful, doubtless, stayed in the rear, but seemed to be urging her husband to approach; he jumped on the bed, climbed along the blankets and tried to approach M. M—, concealing himself the while as much as possible. The latter then experienced a certain anxiety, and made a noise in order to drive off the little man, who fled terrified.

The affective state is very shrewdly analysed, and the case deserves attention. The variable affective state of the subject reacts on the hallucination itself, to borrow the same emotional shade. The small personages have an affable bearing when M. M— is amused at their gambols; then they have a perplexed air whilst watching the patient, who is equally astounded, and finally they flee when the latter drives them off.

#### PAINFUL LILLIPUTIAN HALLUCINATIONS.

Although the pleasing affective state is one of the most frequent and the most interesting characteristics of Lilliputian hallucinations, it is not always so. Observation shows that sometimes the dwarfish visions are accompanied by fear and anxiety.

A girl of seven years old, suffering from measles with a temperature of 40° C. (104° F.), saw one morning some little black devils 18 centimetres high climb up the curtains of her bedroom—an apparition which lasted a few minutes. The child was so terrified that she called her father to her assistance. It is logical to suppose that the grave organic state raised this dark and painful image. However, it does not always happen in this manner, as we have already seen. Witness also the doctor who in a feverish

delirium during typhoid fever was amused at seeing some little Italian dolls dancing on his bed, or the soldier who, having returned exhausted from the trenches and tended by myself during the Great War, saw a happy village wedding file past on the floor.

Bourneville and Bricon have related the following case: "An epileptic child treated with curarine related one morning that he had been very frightened during the night, having seen a crowd of small folk 28 centimetres high seated on a table who made faces at him."

Now curarine causes paralysis of the vaso-motor centres, with lowering of arterial pressure and a weakening of the cardiac action, due to paralysis of the Xth nerve and the excito-motor centres of the heart.

# LILLIPUTIAN HALLUCINATIONS HAVE ALWAYS THE SAME CHARACTER AS THE AFFECTIVE STATE.

As we have seen in this communication the mental phenomenon is parallel to physiological modifications; Lilliputian hallucinations have always the same character as the affective state. It is that which gives to the vision its tint and its modality. In the same way the form of the dream reveals the psychism of the sleeper. Halbrachs relates that he was with a young man who dreamt he was condemned to be hanged and awoke sad and preoccupied.

If the patient is organically euphoric, then the dream-delirium draws from the subconscious the mobile coloured and pleasant Lilliputian hallucination to which the definition of Baillarger applies so well: "A sensorial perception independent of all external stimulation of the centres, and having as the starting-point the involuntary exercise of the memory and imagination." Goblins, graceful and delicate dolls, musicians, marchionesses, joyous crowds, battalions of soldiers, charming pictures of childish recollections, fairy-like and minute, that the imagination colours in vivid tints, and all this little world in movement, filing past, playing with a complete impression of life and with a precision of coloration and of detail which only exists in dreams.

"What are these elfin crowds," says Mignard, "these parades of small folk, these moving and diverting scenes, if not the objectivized recollection of the fairy land in which the imagination of youth delights, an imagination nourished upon stories, images and toys, whose form adapts itself as well as possible to the childish desire of a reduced universe?"

If the patient feels pain, then unpleasant Lilliputian hallucinations appear.

A kindly old man, with a cultivated mind, a fine speaker and a great smoker, after having enjoyed the delights of a great fortune and a good table, found himself afflicted with senile gangrene as he neared the age of eighty years. One day whilst awaiting his doctor, the latter found him on a couch in his drawing-room in front of the window. His eye was anxious, his gaze fixed on the cotton-wool which covered his foot. As soon as the doctor approached: "Pass me my gun, my dear colleague," said the patient, "they have hidden it."

Doctor: "Oh! what do you want to do with it?"

Patient: "Why, I intend to kill the little monsters who are attacking me; those horrible little men who pursue me relentlessly. Look at them climbing on to my big toe. What nimbleness! They are small, but what numbers of them.

Look! There are some of every colour.

Look! There are some of every colour.

They are climbing in groups along my leg. Can you not see them? They are still mounting; how can I stop them? Pass me my gun." Such was the form that his delirium ordinarily assumed when his sufferings became aggravated.

This observation shows admirably the constant relationship between the affective state and the hallucination. This old man, in his paroxysms of suffering, could only have a painful vision, as the melancholic in his moral pain can only have frantic and sad Hallucination is, as a matter of fact, delirium.

These are a few considerations that I have thought well to develop in order to show the relationship between hallucinations and organic modifications. Pathological psychology tends more and more to become a branch of general pathology.

I am deeply indebted to my friend W. N. le Mansois-Field, B.A.. teacher at the City of London School, for the translation of this communication.

#### PRINCIPAL BIBLIOGRAPHY.

Leroy and de Fursac.—"Les hallucinations Lilliputiennes." Société de Psychiatrie de Paris in Encephale, March, 1920.

I. Salomon.—"Hallucinations Lilliputiennes au cours d'un érysipèle de la face," Soc. Clin. Med. Ment., July, 1920.

Dupouv and Bonhomme.—" Deux nouvelles observations d'hallucinations Lilliputiennes," ibid., May, 1921.

Leroy.—" Le syndrome des hallucinations Lilliputiennes." Encephale. November, 1921.

Idem .- "Le syndrome des hallucinations Lilliputiennes," Monde med., April 18, 1922.

Idem.—"The Syndrome of Lilliputian Hallucinations," Journ. of Nerv. and Ment. Dis., New York, October, 1922.

Flournoy.—" Hallucinations Lilliputiennes atypiques chez un Vieillard atteint de cataracte," Encephale, November, 1923.

Colin and Cénac.—"Alcoolisme et hallucinations Lilliputiennes," Soc. Clin. Med. Ment., December, 1923.

Lelong.—" Hallucinations Lilliputiennes recidivantes à chaque période menstruelle," Soc. Med. Psychol., March, 1923.

#### (2) Ribot, Psychologie des Sentiments, p. 32.

Lilliputian Hallucinations(1). By MARION C. ALEXANDER, M.B., B.Ch.Belf., Assistant Physician, Royal Hospital, Morningside, Edinburgh.

MANY French psychiatrists have described a particular variety of visual hallucination to which M. Leroy has given the name "Lilliputian." They are found in many types of insanity and also have been known to occur in normal people. Their character does not vary in that the patient sees everything in miniature. Little men, little horses indeed little animals of all kinds, sometimes not any larger than one's finger, disport themselves under his gaze, all relatively proportioned, perfectly made little people who seem to him to belong to a world of their own, and to have stepped out of it into this big one of ours. There is a condition known as micropsia, in which the patient sees objects around him several sizes smaller than they are in reality, but this must not be confused as easily it might-with true Lilliputian hallucinations. It might be put into the category of illusion, for there is a perception of an actual object, seen very much reduced in size, like the reflection in a convex mirror.

I am indebted to Prof. G. M. Robertson for allowing me to describe to you the following case which I had the opportunity of observing in the Royal Mental Hospital, Edinburgh.

Mrs. B— was admitted to Morningside on September 22, 1906. She was then 46 years of age, of somewhat poor physical development, but the only organic lesion found was a slight impurity of the first sound in the mitral area. As regards her family history, very little could be elicited from her relatives; the only point of importance ascertained was that she had a daughter suffering from dementia præcox. Her previous health had evidently been good. She was reported to have been "peculiar" for some years, but had been quite capable of carrying on her household duties.

As to her mental state on admission she was depressed, worried and anxious. She was restless and excited, talking incessantly, and making continuous movements with her hands. Her memory was good. She sometimes could answer questions, but she suffered from a degree of mental enfeeblement. She had the following delusions. She imagined that her husband had treated her cruelly and that her food had been poisoned. She believed that the nursing staff were her servants and ordered them about in an imperious fashion. She had well-marked auditory and visual hallucinations. She saw around her great numbers of little

(1) A paper presented at the Annual Meeting held in Belfast, July 3, 1924. LXXII. children, of so small a size that she could take them all into her hands. The constant movements of her hands mentioned above were due to picking up these children and setting them down again. She conversed with imaginary people around her about the children and spoke in a low caressing voice to the children themselves. She evidently was in constant dread that her babies would suffer some injury—especially that they might fall into the fire and be burned. She did not like to see them running about on the floor and would pick them up and place them in her bed.

When I first knew her in 1921 she had become more enfeebled. She was so completely absorbed in the nursing of these little folk that she appeared to be oblivious of what was going on around her. She sat all day long in the same chair, her hands held close together, often tightly clenched, and about a foot away from her face. She believed that by doing this she was holding the children out of harm's way. She would not let go of the babies even to take food and consequently had to be fed at all her meals. Her habits were dirty, and she did not obey the calls of nature. This may have been due to engrossment in the task of looking after her Lilliputian family.

She evidently had names for each one of them. She called one of them Reginald, another Harold. She did not care to discuss them with me, nor would she say how many there were, or whether they were girls or boys, dark or fair. She became irritable at times when questioned with regard to them, probably because she felt that if she was not giving her undivided attention to them harm might befall them.

Many, many times I have listened to her admonishing Reginald—"Now you must be a good little boy and not run away through my fingers," and here she would watch him climb down on to her lap. With an indulgent smile she would pick him up into her hand again. Reginald seemed to give her a great deal of trouble. He was the most mischievous. Often he escaped through her fingers and reached the floor. She was then afraid that he would get crushed to death by a door closing when he was standing on the threshold. She was loud in her protests to anyone opening or shutting a door when Reginald or any of her little folk were wandering about in the vicinity.

She was suffering from an attack of influenza a little while ago and remained in bed. On being asked where her children were, she carefully lifted the bed-clothes and looking underneath them said, "Oh! the children are here." She then picked them up between her fingers and thumb, each one being lifted separately with extreme caution. I offered her assistance in this task, but she

said, "Oh, no, you mustn't touch my babies." She then discovered that Reginald was not in her hands and started an exhaustive search for him. After several seconds she found him hiding in a fold of the blankets, picked him up and placed him with the others. Later, when I was leaving the room she said, "Leave the door open, please; if you slam the door it will crush my babies; my babies mustn't be hurt." She was very perturbed when nurse was attending to her, and more especially when her bed was being tidied. She had the greatest objection to this performance, as the children hid in the folds of her bed-clothes and it was difficult for her to keep them within sight. She was afraid they would be smothered in the blankets.

It required great tact on the part of the nurse who clipped her nails. Each time nurse appeared with the scissors she became exceedingly angry and loud in her protestations: "You mustn't use scissors; you might cut my babies."

When she was going out for a walk and nurse brought her coat, she took all her babies in one hand and put her disengaged hand into the first sleeve. She then changed the babies into the empty hand and thus surmounted the difficulty of keeping the children safe.

I have often asked her to put some of her children into my hands but evidently she lacks confidence in me, because she has never yet complied with my wish. On occasion I have picked them off her lap, but always incurred disfavour by this action.

Mrs. B— was evidently a very motherly woman, whose one joy and aim in life was the rearing of children and the care of her household. In her case her profession or life-work has influenced her hallucinations, as in many other cases of this kind described by French writers. The hallucinations alone are of a pleasant nature, but the emotions they cause are mixed. On the one hand she experiences the blissful feelings of a devoted mother, caring for her beloved children, while on the other she is depressed and anxious lest harm should come to them. So strong is this last feeling that it shadows her life like the sword of Damocles. For this reason she has an anxious expression and rarely smiles.

Since my attention has been drawn to this type of hallucination in Mrs. B—, I can recall to memory a case of delirium tremens that had similar hallucinations. This man, in addition to the ordinary symptoms of delirium tremens—which I need not describe—saw crowds of very tiny demons, certainly not taller than six inches and perfectly proportioned. They were black in colour and their expressions denoted malignancy. They terrified him. They appeared to hover above his head in a miniature

aeroplane for the purpose of dropping bombs on him. The method of attack caused him to shake with fear, but did not cause any sense of physical injury. When he shouted at them and waved his arms they retreated to some distance, but soon returned.

It has been noted that these Lilliputian hallucinations usually give pleasure, except on the rare occasions when the figures seen are of a black colour in which case they cause the terror and distress experienced by the above patient.

I have remarked before that this type of hallucination is found in different forms of insanity. From French literature on the subject I have collected instances of their occurrence in the following disorders: They have been observed in epilepsy, general paralysis, acute and chronic alcoholic insanity, drug addiction, and in the delirium of such diseases as pneumonia, and in the forms of insanity associated with arterio-sclerosis. Although the type of disease in which they occur varies, the hallucinations have many features in common. They usually take the form of people, sometimes of ordinary individuals and sometimes fairies, elves and gnomes. They are clothed in bright colours and cause a pleasurable sensation to the patient, seldom producing fear. They themselves or their actions are frequently reminiscent of the patient's occupation. Evidence of this is shown in a case described by Leroy. Alfred de Musset, the author, saw three little men who tidied up the tables at which he usually wrote, dusting his inkpot, etc.

In another case described by Prof. Duval, the patient, who was a music-hall dancer, saw three little Bohemian musicians, about 16 in. high, dressed in red, who delighted her by playing the latest dance music.

Mrs. B—'s case could be cited as another example of the relationship between the hallucination and the previous occupation of the patient, for her preoccupation with the tending of her children was a method of carrying on the work to which she had devoted her life.

Leroy puts forward the theory that these hallucinations are of toxic origin, thus bringing them into the same category as micropsia, whose toxic cause is not denied. In the case of Mrs. B—, though there is no record of any lung trouble on admission, she has now definitely developed phthisis, so that there is a source of toxicity in her system. It has not yet been determined how these different toxins act, but Heilbronner has suggested that they act upon the cortical centres, whose duty it is to receive impressions from the body muscles, including the eye muscles. Leroy supports him in this idea.

I feel that this theory of a toxic cause is not an adequate

explanation. While any toxin may justifiably be believed to disturb the normal mental balance, this would not explain why these hallucinations take this particular form. In childhood it is small things that make a special appeal to the child mind. His toys are often adult possessions in miniature. He delights in a little chair and table of his own, in little horses, dolls and dolls' houses. Especially with little children the majority of the stories that they read and hear are about fairies, elves and little people. The pictures in their books portray these little people, and these must take a large share in their own games, day-dreams or phantasies. People who do not completely develop mentally may leave a part of themselves behind in this period when they took such a delight in everything small. When they are carrying out their adult life, with its ordinary occupations, no memory of their childhood's interests enters consciousness. Perhaps it is when this life is thrown out of gear by some cause, whether physical or mental, that they return to the stage when their interests were chiefly in small things and in small people. This theory has been suggested by Dr. Flournoy in an article in L'Encephale, vol. xviii, 1923.

Two other explanations have occurred to me which I will just briefly mention. Most psychologists recognize a tender instinct which is chiefly aroused by anything smaller or weaker than the individual. In some people this instinct may be abnormally strong. It is kept in its proper place as long as these individuals maintain their normal mental balance. If from any cause this is overthrown the instinct may predominate over all others, and because the patient delights in small objects his hallucinations become Lilliputian.

The second explanation is that the patient suffers from a strong inferiority complex. Anything smaller than himself tends to counteract his sense of inferiority, and to give him a feeling of strength and power. Lilliputian hallucinations would therefore be those most likely to please him.

Hitherto very little notice has been given to this subject by English psychiatrists. It is, therefore, not surprising that there is no generally accepted theory of the causation of these hallucinations. It is an extremely interesting and engrossing subject, about which we hope to discover more. I am convinced that there are numerous cases suffering from Lilliputian hallucinations that have remained undiscovered through lack of care in examination. Were these to be reported upon and freely discussed, we would be provided with the necessary material for elucidation of the problem.

General Paralysis and the Treatment by Malaria Fever. By A. R. Grant, M.D.Aberd., Deputy Medical Superintendent, and J. D. Silverston, M.B., B.S.Durh., Senior Assistant Medical Officer at the County Mental Hospital, Whittingham, Preston, Lancs.

WAGNER-JAUREGG (1, 2, 3) was led to adopt the treatment of general paralysis by malaria, following the preliminary observations he had made in 1887. He and many other investigators had noticed the tendency of paretics to improve after intercurrent affections, and he finally decided to use benign tertian malaria because he had satisfied himself that it could be controlled whenever desired. The publication of his results and those of Gerstmann (4). Weygandt (5), Kirschbaum (6), Delgado (7) and others attracted considerable attention, and an increasing amount of literature on the subject is accumulating. Observations on this subject are being made in most European countries, in America and in this country. So far the treatment has been empirical; no one has been able to prove why infection with malaria should produce such Jahnel and Weichbrodt (8) have shown the striking results. destructive influence of high temperature as such on the spirochætes, and it may be the case that the intermittent waves of high temperature may be more destructive to the spirochætes than a continuous temperature to which the organisms might have a better chance to adjust. Again it may be that spirochætes under these conditions would be more readily killed when arsenic is given. Muehlens and Kirschbaum (5) hold the view that there is a great impoverishment of the blood following inoculation, and that the subsequent regeneration leads to a reactivation of the immunity process. In this connection it may be noted that some authorities. e.g., Brown and Pearce (27), believe that success in the treatment of neuro-syphilis by chemical preparations, e.g., tryparsamide, is due, not to the germicidal properties of the chemicals in question. but to the fact that these chemicals confer some form of protective reaction on the tissue cells which enables them to exercise a destructive effect on the spirochætes. Moore (28) has pointed out that the relative infrequency of clinical neuro-syphilis in women as compared with men may be due to the incidence of pregnancy. It is known that pregnancy modifies the reaction to syphilitic infection, and it may be that the physiological process in pregnancy tends to prevent the disease.

Many observers believe that the cure can be explained biologically.

Recurrent fever, according to Muehlens and Kirschbaum (6) is said to be of great value in the treatment of neuro-syphilis because of the close relationship between the spirochætes of relapsing fever and syphilis. Delgado relates a most interesting practice bearing on this question. Among the natives of Peru affected with leishmaniasis of the skin and mucous membrane there is an ancient custom of visiting a locality where malaria is endemic. They allow themselves to contract malaria, and find that the lesions of leishmaniasis eventually heal up and are cured. Delgado points out the suggestion of a biological relationship between the causal agent of leishmaniasis and the Spirochæta pallida. Both are destroyed with arsphenamin.

Blood taken from a non-syphilitic during a paroxysm of tertian fever generally gives a mildly positive Wassermann reaction. This close relationship of the sporozoan of malaria to the spirochæte of syphilis encourages us to believe in the hypothesis that specific immunity reactions are renewed in the tissues of the paretic infected with malaria, which not only bring disaster to the spirochætes, but also effect an arrest in the progress of the disease in the patient.

If it be the case that malaria can cure or even arrest neurosyphilis, observations made in countries where malaria is endemic and syphilis common should be of great value.

Von During, who was sent from Germany to a province in Asia Minor to investigate an epidemic of venereal disease, reported that cases of general paralysis and locomotor ataxia were not found. Colonel Lambkin reported that syphilis was very prevalent among the negro population of Central Africa, and that tabes and general paralysis were rare. Bercovitz (\*) states that 90% of the three million people of a certain district in China have attacks of malaria during the course of a year, and that probably all carry parasites in the system. Syphilis affects from 50 to 60% of the population; but that during eight years' residence he has not seen a single case of general paralysis, and only two or three cases of neuro-syphilis.

Pilcz and Mattauschek (10), investigating the final histories of about 5,000 soldiers who acquired syphilis in 1880–1890, found that 5% had developed general paralysis. Of the patients who had suffered from erysipelas, malaria or other feverish diseases a year or two after their primary lesion, not one became paralytic. At one time it was thought that the leucocytosis produced by some of these infections might in some way influence the course of neuro-syphilis. Jahnel rejected leucocytosis as an explanation after he found moving spirochætes in the brain of a patient with a suppurating meningitis accompanying the paralysis. He states that if such a severe cerebral suppuration as this had no influence

on the spirochætes, we must give up all hope of therapeutically affecting paralysis by means of an artificial leucocytosis.

From these observations it might be argued that there was no possible doubt as to the efficacy of malaria as a preventive of neuro-syphilis. Unfortunately, however, until it can be explained why only about 10% of syphilitics develop neuro-syphilis, until the theory that there is a special strain of spirochæte which has an affinity for the nervous system, and the theory of Edinger that in a certain percentage of syphilitics the nervous system is especially vulnerable, are proved or disproved, we cannot claim that malaria definitely prevents neuro-syphilis. At the same time it seems fairly certain that neuro-syphilis is very rare where malaria is endemic.

The selection of suitable cases for inoculation naturally presents Reese and Peter (11) state that elderly decrepit patients should be unconditionally excluded from the treatment. It is also stated that if a patient has developed a bed-sore he ought not to be inoculated. These exceptions are no doubt justified, but in a previous article (25) we were able to report the case of J. W. B-, male, aged 52, who was in a very debilitated state, had had several seizures, had lost control of his bladder, and eventually developed a bed-sore over his sacrum. As a last resort it was decided to inoculate him with malaria, with the result that the bed-sore healed, the patient regained control of his sphincters, and was able to walk about comfortably and without assistance. Subsequently the patient was discharged in a state of apparently complete remission. Another male patient, D. S-, had a large bed-sore on admission which healed up during malaria treatment. Reese and Peter (11), in quoting Straub and Kauffmann, state that a distinct syphilitic aortitis is found in 81% of paralytics, and that particular attention should be paid to the state of the heart. best results, according to Reese and Peter (11), and Kirschbaum (6), are obtained in the maniacal type of general paralytic; on the other hand, Gerstmann (4) says the demented forms are the most hopeful.

Raynor classifies his cases as follows:

Group I.—Gradual onset with changes of disposition, dullness, emotional instability, orientation and memory defects, in some cases expansive trends.

Group II.—Onset of short duration, euphoria, with restlessness and expansive trends.

Group III.—Depression, with or without retardation or agitation, associated with worry, or somatic complaints.

Group IV.—Delusions of persecution, poisoning and jealousy, auditory and visual hallucinations.

According to this classification, out of the 15 male patients discharged recovered from this hospital, 9 were from Group II, 4 from Group I, and I from each of the other two groups.

The cases might have been divided into early, intermediate, and late. An accurate classification is, however, by no means easy, as it has been frequently observed that cases which clinically were regarded as early showed advanced histopathological changes at the autopsy, and that late cases from a clinical point of view showed slight changes pathologically. The same is true of the cerebrospinal fluid—the difficulty of a correct interpretation is great.

The method of inoculation is well known, and need not be further commented on here. It is our experience that it does not matter when the blood is withdrawn from the donor provided there are parasites in it. The intravenous method does not seem to us to present any advantage over the subcutaneous route of inoculation, other than that the incubation period becomes shorter, being from 5-8 days, as compared with 12-13 days if the latter method is employed. According to Reese and Peter (11), there are plasmodia in the blood long before a real attack of malaria, although about 5% of cases do not develop malaria even after repeated inoculations. In our series of 78 cases of neuro-syphilis, we never failed to inoculate eventually, although several failed to take at first. In 11 cases (10 general paralytics and I tabetic) inoculation was performed on two occasions, and the patient subjected to two attacks of malaria. Again in 7 of these cases inoculation was not successful at the first attempt; in all these inoculation was repeated, and 6 of them took. Sometimes it may happen in a hospital that the only patient with parasites in his blood is a case undergoing a second course of malaria. If it be intended to inoculate from him, it is advisable to do so at once because such cases tend to undergo auto-immunization after two or three rigors. Wagner Jauregg (1.2.3) and others have already pointed out the infrequency of relapses in cases of inoculated malaria, and in a previous publication (25) we drew attention to the same thing. time we stated that only one relapse had occurred in our list of 50 cases. At the time of writing, in a series of 78 treated cases of neuro-syphilis, we have had 2 parasitic relapses. reports that 56.5% of his mosquito-infected cases relapsed, whereas relapses among the inoculated cases amounted to only 3.3%. It seems to us to be inadvisable and impracticable to infect by mosquitoes if other means are available. When blood is being sent from one hospital to another for the purpose of inoculation, the best method to employ in our opinion is that devised by Potzl. The blood is caught in a sterilized flask which contains

glass beads, the flask is shaken for about ten minutes, and the defibrinated and partially hæmolysed blood is poured into a test-tube, and fixed in a thermos flask containing ice. Hermann (18) was able to inoculate patients successfully after 47 hours, and recently (24) we were successful in inoculating a patient with defibrinated blood kept at 0° C. for 66 hours.

Reese and Peter (11), in a report from Nonne's clinic, state that 3 cases of juvenile general paresis treated by them remained entirely uninfluenced, and assert that the experiences of all authors proved that this form of the disease had failed to respond to any therapeutic treatment. Hermann (18), on the other hand, reports 4 cases of juvenile general paralysis in which definite improvement was shown, and states that he considers it a duty to subject initial forms of this disease to malaria treatment. We had the opportunity of treating one case of juvenile general paralysis. We did not obtain any improvement, and the patient, a girl of 20, died of a calculous pyonephrosis. In view of Hermann's experience, however, we should feel inclined to give any other juvenile general paralytic a trial with malarial therapy.

In discussing the treatment of general paralysis by malaria, there has to be considered not only the efficacy of the treatment, but the safety of the method. With reference to the latter, Weygandt states that if it were necessary he would not hesitate to use it on his nearest relative or on himself. At the same time we are of the opinion that while in the majority of cases no trouble is experienced, many precautions are necessary. Muchlens ( $^{29}$ ) recommends that (a) the treatment should be carried out in hospitals free from anopheles, (b) the quinine tolerance of the patient should be tested before inoculation with malaria, and (c) only carefully identified strains of pure tertian should be utilized.

With regard to (c) we are in complete agreement. In our hospital we have been able to use the same strain for a period of over two and a half years. We have made many observations on the behaviour of this strain, which we term "W" strain from the first, during its passage through 40 hosts. The same strain can only be kept up in a hospital with a large number of suitable cases available, but this form of treatment is in use in so many hospitals in this country that there ought to be very little difficulty in procuring a reliable strain. In regard to (a), the Board of Control has recently issued a list of suggestions which have been sent to all mental hospitals, and if these suggestions are carried out, it seems to us that in this country, at all events, one can risk the presence of anopheles in the hospital. As regards (b), we have (25), in a previous article, reported cases where the attack of

malaria was terminated by the intravenous injection of salvarsan. We suggest that if a patient is unable to tolerate quinine it should be ascertained if he can tolerate salvarsan. If he can, then the inoculation with malaria might be justified.

The number of rigors allowed varied in our cases from 8 to 14. Each case must be judged on its merits, and as a patient can be reinoculated at a later date if required, it is wiser to err on the side of caution. The average female patient should be allowed about two-thirds of the number of rigors an average male patient would be allowed. There have been numerous complications during the attacks of fever noted by various observers. Hermann reports cases of marasmus, hæmorrhagic cystopyelitis, pachymeningitis hæmorrhagica, cardiac weakness and sepsis, and ædema of the face (which disappeared after quinine had been given for two days). Redlich noted such symptoms as delirium, stupor, trigeminal neuralgia, spinal paraplegia and epilepsy. Von Askgaard often observed transitory ill-effects, such as flagging of the heart, partial loss of consciousness, pain in the left side of the body, due perhaps to enlargement of the spleen. Necrosis of the phalanges has also been noted.

Muchlens and Kirschbaum ( $^{5.6}$ ) in 72 cases observed jaundice in 12. The appearance of jaundice is an indication for the cutting short of the malaria. In our series of 78 cases of neurosyphilis we had 4 with jaundice. Malaria is usually arrested by quinine hydrochloride gr. x t.d.s. for three days. It is rarely necessary to give it longer. Blood-films from patients who have been so treated should be examined daily for three months following the disappearance of the infecting agent from the blood-stream.

Wagner-Jauregg (1) recommended that after parasites had disappeared from the blood a course of neosalvarsan should be given, as the preparation would act not only against the syphilis, but also against malaria. While accepting this view, and we ourselves are making use of the combined form of treatment in several of our cases, we are inclined to think that at present the combined treatment is apt to confuse the issue. While comparison between the cases that have received a course of arsenical treatment and those that have not are interesting, we think that further observations should be made on the effect of malaria alone. There are, however, many points about this form of treatment which are still obscure. Reference has already been made to the view that waves of high temperature might have a destructive effect on the spirochæte. If this is so, then we would expect similar results from the methods of Stärche (16), who produces an artificial fever by an

intramuscular injection of boiled milk, followed by an injection in the evening when the temperature is at its height of 0-6 to 0-9 grm. of neoarsphenamin. This has the effect of sending the temperature still higher, and the treatment is repeated weekly.

Askgaard (16) reports complete restoration of earning capacity in 32.4%, and great improvement with partial restoration in 21.6% of 37 cases. The disease has progressed in 3%, and in 6% after a transient remission. Excluding the patients who were treated mainly for the purpose of keeping the malaria strain alive, the apparently cured totalled 36.6% and the improved 26%.

Nonne (17) reported 74 clinically and serologically diagnosed cases on which the technique was practically the same as that of Wagner-Jauregg, with the result that a complete remission occurred in 10-8%, and 24.3% of the remainder were favourably influenced.

Pilcz (18) states that in 1919-1920, 141 patients were treated. Of that number 36.1% completely recovered, 12.7% had remissions, but were not able to return to their occupations, 40.4% remained stationary or had incomplete remissions, and 10.6% died. Weygandt (5) reported that of 50 cases treated by this method, remissions were got in 88%, good remissions in 48%. In 298 cases Gerstmann (4) claims to have obtained a complete remission in 38%. Dattner (19) has obtained good results not only in the treatment of paretic cases, but also secondary and latent syphilis. Hubbard and Dyer (20) report results from the St. Elizabeth Hospital, Washington, where 68 patients were treated, and 51 can be accounted for. In 31% a complete remission was obtained, i.e., a remission in all three spheres, mental, physical and serological. 38% were not notably changed, 24% deteriorated, and 26% died. Plehn (21) admits an improvement in the mental condition in at least one-third of the cases of general paralysis inoculated with malaria, but considers the method to be less promising in cerebro-spinal syphilis or tabes dorsalis. On the other hand, Pagniez, commenting on the subject, said that the percentage of remissions was not high enough to be convincing, but that the manner in which they occurred indicated something beyond a mere coincidence.

There is a difficulty in accurately defining such terms as "partial remission," "stationary," "improving," etc. There is less difficulty in comparing the death-rates among patients treated by inoculation with malaria and those treated by other methods. In the St. Elizabeth Hospital, Washington, according to Lewis (20), of 1,198 male general paralytics treated during a certain period, 47.6% died in the first year, while by the end of the second year 72.7% had died. In our male cases treated by malaria 17.7%

died during the first year in hospital, while by the end of the second year 22.4% had died. Many of these cases, however, had been in hospital for some time before they were inoculated. New cases are now inoculated a week or so after admission to the hospital. The difference in the mortality rate is very marked, and it seems evident that even where a remission is not obtained life may be prolonged.

Observations on the cerebro-spinal fluid and blood are made on all our patients before and after treatment with malaria. As the time of withdrawal of cerebro-spinal fluid following fever treatment varied from I day to I3 months, we were able to observe whether changes, if any, progressed or remained stationary. In a previous article (26) we recorded observations on 40 cases. Our experience is in entire agreement with all other reports we have seen bearing on this subject. No prognostic conclusions must be drawn from the fluid and serum reactions, as there is no parallelism between the physical improvement and the behaviour of the cerebro-spinal fluid and blood. At the same time we found an improvement in the cerebro-spinal fluid in nearly every case. The earliest signs of improvement in the cerebro-spinal fluid were manifested by a diminished lymphocytosis and lower globulin, and in the blood a reduced Wassermann reaction, even in cases where no salvarsan Pötzl (23) found distinct improvement in the had been given. cerebro-spinal fluid. Reese and Peter (11) found improvement in both blood and cerebro-spinal fluid, and are of opinion that a disappearance of the abnormal serological reaction may still take place in the course of years in many of the patients who are still in the remission stage.

Prior to the year 1924, 43 male and 6 female general paralytics were treated by inoculation with malaria. During the year 1924 15 males and 5 females were so treated, making a total of 58 males and 11 females. Of the 58 males treated, 15 have died, 15 have been discharged in a state of apparently complete remission (2 have been readmitted to other mental hospitals, one after being at home for a year, and the other after three months), 18 are stationary, 5 improving, 2 obviously deteriorating, and 3 recently inoculated.

Eleven females have been treated: 5 are dead, I shows improvement mentally and physically, and 5 are stationary. It seems from our experience that women are less susceptible to successful treatment than men. Taking male cases only, our recovery-rate has been 26.2%. Various continental observers report complete remission-rates from 10.8 to 38.6%. We try to keep in touch with discharged patients, and have succeeded in doing so with 13 out of the 15 discharged. Of these, 5 are in steady employment,

and seem to have regained their full wage-earning capacity, 4 are doing casual work; but are capable of doing a full day's work if work were available, 4 report that they are not working on account of physical disabilities. In many cases which have not gone on to complete remission, marked benefits have accrued. There has been a marked improvement in general bodily health, neurological signs have improved, and convulsive seizures have become less frequent. A peculiar psychical change has been noted in some of them, the facile disposition giving way to a self-assertive and on occasion to an aggressive one.

#### CONCLUSIONS.

- 1. Malaria therapy is the best method known of treating general paralysis, and it is a safe method if proper precautions are taken.
- 2. One attack of malaria seems to confer a partial immunity to a second infection.
- 3. Complete remissions occur in all clinical types of the disease, but are most common in (i) the expansive type, (ii) 'the demented type.
- 4. In cases which do not go on to a complete remission life is prolonged, and marked physical and mental improvement may result.
- 5. Malaria therapy does not seem to be so successful in women as in men.
- 6. Among male general paralytics of the class admitted to mental hospitals in this country we may reasonably expect a complete remission-rate of from 20 to 30%.

We are greatly indebted to Dr. R. M. Clark, Medical Superintendent, under whose general supervision this work has been carried out from its inception, for his advice and assistance, and for permission to publish these results.

(1) Wagner-Jauregg, "Ueber die Wirkung der Malaria auf die Progressive Paralysis," Psych. Neurol. Wochens., 1918, Nos. 21, 22.—(2) Wagner-Jauregg, Wien. med. Wochenschr., 1921, Nos. 25 and 27.—(3) Wagner-Jauregg, "Treatment of General Paralysis by Inoculation of Malaria," Amer. Journ. Nerv. and Ment. Dis., May, 1922, lv, p. 369.—(4) Gerstmann, Zeitschr. f. d. ges. Neurol. u. Psychiat., 1912, lxxiv.—(5) Muehlens, Weygandt and Kirschbaum, Münch med. Wochenschr., 1920.—(6) Muehlens and Kirschbaum, Zeitschr. f. Hyg. u. Infektions., October 12, 1921, xciv, p. 1.—(7) Delgado, Amer. Journ. Nerv. and Ment. Dis., lv, No. 5, p. 376.—(8) Jahnel and Weichbrodt, Zeitschr. f. d. ges. Neurol. u. Psychiat., July 30, 1921, lxix, p. 220.—(9) Bercovitz, Journ. Amer. Med. Assoc., lxxxii, May 24, 1924, No. 21, p. 174.—(10) Pilcz and Mattauschek, Zeitschr. f. d. ges. Neurol. u. Psychiat., 1912, xiii.—(11) Reese and Peter, Med. Klin., March 23, 1924, xx, No. 12, p. 372.—(12) Davidson, Brit. Med. Journ., March 7, 1925, pp. 452—453.—(12) Hermann, Med. Klin., April 6, 1924, xx, No. 14, p. 445.—(14) Redlich, Wien. klin. Wochenschr. (Vienna), 1924, xxxvii, pp. 131–154.—(15) Von Askgaard, Ugeskrift f. Laeger, April 10, 1924, p. 307.—(18) Stärche, "Treatment of General Paralysis," Nederlandsch Tijdschrift-Geneeskunde (Amsterdam), April 19, 1924, i,

p. 1751.—(17) Nonne, Treatment of General Paralysis and its Relation to Malaria.—(18) Pilcz, "Von Wagner's New Treatment of General Paralysis," Lancet, January 6, 1923.—(18) Dattner, "Treatment of General Paralysis," Klin. Wochenschr. (Berlin), January 29, 1924, iii, p. 177.—(18) Lewis, Hubbard and Dyer, Amer. Journ. of Psych., October, 1924, iv, No. 2.—(21) Plehn, "Malaria Treatment of Progressive Paralysis," Deut. med. Wochenschr. (Berlin), January 2, 1924, I, p. 136.—(21) Pagniez, Presse Med. (Paris), July 28, 1920.—(22) Pötzl, Med. Klin. (Berlin), November 18, 1923, xix.—(24) Clark, R. M., "Treatment of General Paralysis by Malaria," Brit. Med. Journ., March 28, 1925.—(24) Grant, A. R., and Silverston, J. D., "Malaria Therapy in General Paralysis," Journ. Ment. Sci., January, 1924.—(24) Grant, A. R., and Silverston, J. D., "Malaria Therapy in General Paralysis of the Insane," Lancet, i, p. 540.—(27) Brown, W. H., and Pearce, Louise, Journ. Exper. Med., xxx, pp. 417, 437, 455, 483 (November, 1919); pp. 33, 193 (1921).—(18) Moore, J. E., "Studies in Asymptomatic Neurosyphilis: Apparent Influence of Pregnancy on Incidence of Neurosyphilis in Women," Arch. Int. Med., November, 1922, xxx, p. 548.—(28) Muehlens, quoted in Journ. Amer. Med. Assoc., lxxxii, No. 6.

The Mental Factor in Miners' Nystagmus. By H. WILFRED Eddison, M.A., M.B., B.Ch.Camb., D.P.M., Assistant Medical Officer, Banstead Mental Hospital, Sutton, Surrey.

[Through the kind recommendation of the late Dr. W. H. R. Rivers I was appointed by the Medical Research Council to undertake a study of the psychoneurotic aspects of miners' nystagmus for six months in 1920–21, and subsequently given permission to publish my results.

The investigations were carried out at Tredegar (75 cases), Newcastle, in Staffs (185), and Sheffield (50).]

# THE THREE CLINICAL VARIETIES.

The condition may appear in one of three forms:

- (1) "Latent nystagmus" (1), a term reserved by Llewellyn for those comparatively few cases in which nystagmus is found to be present, without giving rise to subjective symptoms and without the knowledge of the patient. Some injury or illness or drawing the attention of the patient to his condition is usually sufficient to convert a "latent" nystagmus into a "manifest" one (2).
- (2) "Manifest nystagmus" is the name applied by the same writer to the condition obtaining in the vast majority of cases, in which the usual signs and symptoms are present.
- (3) Psychoneuroses (3) closely simulating the signs and symptoms of miners' nystagmus, but without nystagmus ever having been observed. These are most frequently of the nature of hysteria or of the anxiety neurosis.

It is not, however, altogether an easy matter to draw a sharp line of distinction between the second and third varieties, for, in cases of the second group, admittedly neurotic signs and symptoms, especially those of the anxiety neurosis, are apt eventually to supervene and either to replace or accompany the nystagmus.

# THE NEUROTIC PREDISPOSITION.

One frequently finds, on careful inquiry, that there were antecedent subjective symptoms of apprehensiveness, fear, anxiety and the like, or that a definite phobia of the dark or of closed spaces was already present, the existence of which the patient was reluctant to admit. Such was the case in—

No. 74: Æt. 37, duration six years. He previously had a phobia that he was being stalked in the dark. He suffered from headache, depression and apprehensiveness and nightmares. He had nystagmus, tremors of the head and right hand, and tachycardia.

The onset was sudden in many instances (4). Injury, accident or illness were the usual exciting causes in such cases.

No. 30: He had had headaches for some years before. Later, when he was in bed with influenza he became very depressed, suffered from severe anxiety and nystagmus made its appearance.

No. 121: Transient nystagmus followed a blow on the head. The other symptoms had persisted as sleep broken by starts and anxiety dreams, temporal headache, anxiety, irritability, apprehensiveness, paræsthetic pains in the neck, arms and legs, tremors of the hands and eyelids, becoming generalized on examination, brisk reflexes and tachycardia.

Other cases had a sudden onset following: injury to the right eye (5); being buried under a falling roof; without obvious exciting cause; following a depressed fracture of the frontal bone; after a blow on the knee.

In other cases neurotic symptoms made their first appearance at the time of onset of the nystagmus. It was also often found that the neurotic symptoms were first felt after aggravation of the nystagmus by injury, accident or illness. In addition to anxiety states one frequently finds hysteria as a prominent component of the clinical picture.

We have seen, then, that neurotic signs and symptoms may precede, accompany (6) or follow the appearance of nystagmus, and how easily a "latent" may be converted into a "manifest" form. It remains to be shown what relationship, if any, exists between the nystagmus and the psychic symptoms. For this purpose some of the signs and symptoms (7) will be reviewed in detail.

Headache is usually the first and the most severe symptom. It is often also the last to clear up when improvement occurs following rest from work in the pit.

In a few cases the pain was hemicranial in distribution and seemed

to be entirely hysterical in origin. In others it was apt to be present on waking in the morning after anxiety dreams, as if it were a relic of the dream.

After examining a number of miners it became increasingly clear that the headache was not always entirely due to the nystagmus itself. Headache shares in the general exacerbation which so frequently occurs when nystagmic patients get excited or exert themselves unduly, even in those cases in which the nystagmus has long since disappeared. Then, again, when orbicularis and frontalis spasms are a prominent feature, the headache is relieved when the spasms are relaxed—a point utilized in experimental treatment.

Giddiness is almost invariably present, and, to a great extent, follows the incidence of the headache very closely, so that conditions which induce or aggravate attacks of the one do the same to the other, independently of the presence or absence of nystagmus.

Further, attacks of giddiness may rouse a patient from sleep in the middle of the night. They are very probably of the nature of substitutes for the anxiety dream or attack, for they tend to replace the latter symptoms.

No. 233: Had severe claustrophobia, which was specially marked in relationship to one part of the gallery after the body of a miner had been laid there, killed by a roof-fall. At first he felt great fear and anxiety on approaching this spot. Eventually this anxiety was replaced by giddiness.

When one examines a man with regard to giddiness, one is often struck by the exaggerated display of its effects. If asked to stoop, the patient insists that he will fall. After stooping he grasps a chair which is conveniently near to save himself, or, failing this, he falls gently and does not hurt himself.

Orbicularis-spasm photophobia and squint are considerably more marked under examination, or when the patient's attention is directed to the condition of his eyes. They are frequently associated with general muscular rigidity and tremors. They are all exaggerated whenever the patient experiences change of illumination, or when he is excited, startled or surprised, even when sitting quietly at home. Nystagmus is usually present, but is seldom of marked degree.

Dreams.—Anxiety dreams are very common, either alone or accompanied by other anxiety symptoms.

Several instances were seen in which the subject-matter of the dream was clearly connected with events in the past history of the patient which were of significance in the development of the ensuing symptoms.

No. 74: Here a connection is seen between a tic which developed prior to the appearance of nystagmus and a recurring anxiety dream. After twelve years in LXXII.

the pit he had frequent compulsion to elevate his gaze in a jerky manner towards the roof. Then nystagmus appeared. Presently he had a recurring dream that the roof was falling in on top of him, after which he would wake up with a start and a feeling of dread. He also had a phobia of the dark.

Abreaction is defined (8) as "the process of working off a pent-up emotion by living through it again in feeling or action." An extreme recurrence of symptoms results in a neurosis.

No. 214, while discussing his symptoms at an interview, had a severe attack of general tremors, nystagmus and internal strabismus of both eyes, sweating, pulse 120 and an acutely anxious expression.

Resistance (\*) is a well-known characteristic of hysteria, and prominent amongst cases of miners' nystagmus. For instance, several of the men stated that their symptoms came on or got worse whenever they started off for the clinic, sometimes even causing them to turn back and go home. One man had an acute attack when he was informed that he was to come for treatment. Another man nearly always had an attack whenever he got up to perform some re-educative exercises which had been set him.

Anxiety symptoms group themselves together to form typical examples of anxiety hysteria and the anxiety neurosis.

Number of cases in which neurotic symptoms were associated, 199.

Number free from neurotic symptoms, 111.

Of the neurotic cases the neurosis preceded the onset in 26.

The neurosis accompanied the onset in 51.

The neurosis followed the onset in 122.

In those cases associated with neurosis, nystagmus was absent in 27.

In the ordinary forms nystagmus was absent in 7.

Sudden onset without apparent cause in 2.

Onset apparently excited by injury, accident or illness in 16 cases, of which 3 showed no neurotic symptoms.

Condition aggravated by injury, accident or illness in 11 cases, of which 3 showed no neurotic symptoms.

# Cases Regarded as Psychoneuroses Simulating Miners' Nystagmus. (10)

The symptoms and physical signs differ in no essential manner from those of the ordinary cases of miners' nystagmus, with the exception that nystagmus itself is not demonstrable even with the ophthalmoscope.

No. 233: Once an explosion occurred while he was working below. He was panic-stricken and afraid lest the roof fall in or his escape be otherwise cut off. Subsequently he was always uneasy while below ground, and would start at every unexpected sound.

Next his eyes used to ache after any prolonged effort. Sometimes the coal-face would appear to move towards or away from him, and he would look fearfully at the roof and coal-face illuminated by his lamp, and feel it was falling upon him. So he made greater efforts at accommodation. Occipital headache appeared, and the lights seemed to revolve, or to advance and recede alternately, slowly at first, and then more and more quickly in a confused whirl.

## Effects of Compensation.

Since the institution of compensation the number of cases of miners' nystagmus has increased enormously, as is shown by the following figures taken from the Blue Books on compensation statistics: 1908, 460; 1909, 1,011; 1910, 1618; 1911, 2,519; and the number of cases certified annually is still increasing.

#### THE EFFECTS OF TREATMENT.

Owing to shortage of time no prolonged trial of treatment could be attempted.

Hypnosis was employed in a few instances only. In two cases so treated the nystagmus and blepharospasm were completely controlled, in two nystagmus was improved, but in five others no effect was obtained.

Abreaction was utilized in three cases. In each the patient was instructed to talk freely about the events leading up to the outbreak of the disorder, and to try to live through them again. Each man became agitated and underwent an acute exacerbation of his symptoms, including the nystagmus. After the abreaction they were relieved for some days, both as regards the nystagmus and the subjective symptoms, as is usual in the case of the psychoneuroses.

But abreaction is a difficult situation to bring about and it is only of limited applicability.

In other instances a frank discussion on the symptoms and the emotional life, both at home and at work, allowed a readjustment in the men's outlook to be effected, some improvement following. In this class are included those men whose attitude towards their symptoms was unsatisfactory. They were shown that their disability was not so great as they thought, and in several cases the disability was diminished.

Muscular relaxation produced slight temporary benefit. The men were made to lie on their backs, to give all their attention to their muscles and to relax them as far as possible. The orbicularis spasm and eyelid-flicker abated to some extent if a marked degree of relaxation was obtained, but they returned as soon as the relaxation was suspended.

Re-educative exercises produced the best results. They were directed to giddiness on stooping and on looking up. The man was instructed to bend and touch his toes with his hands as many times in succession as were necessary to produce giddiness. Nystagmus appeared usually with the symptoms. He was next told to repeat the exercise a number of times just short of this, and

to carry it out six times daily for a few days and then gradually to increase the number. In this way the capacity to stoop was increased, in some cases, from six to over eighty times, and several men were enabled to get about better in consequence. Similarly the capacity to look upwards was increased by graduated exercise.

Psycho-analysis was employed in a few cases, and in some associations of interest were obtained.

In general, although no cure was obtained in the time available, amelioration of the symptoms, and with them the nystagmus, was seen. Some patients improved a little under treatment, but relapsed as soon as it was abandoned. The hysterical dependence upon the physician was evident. In others the improvement of one symptom—for instance, the headache—was accompanied by the exaggeration of another, also characteristic of the psychoneuroses.

# ÆTIOLOGY.

There are two principal hypotheses:

- 1. The postural hypothesis, to the effect that the condition is caused by the miner working in a cramped and unnatural position, both as regards his body and his eyes.
  - 2. The defective illumination hypothesis.

The former has been almost universally abandoned.

How does the deficient illumination theory fit in with the facts of the case?

In making a first-hand study of the disease one is at once struck by the prevalence of neurotic symptoms. In the writer's experience it was quite impossible to separate the signs and accompanying symptoms, which others claim are the result of nystagmus, from truly neurotic symptoms of mental origin.

Against the claim that deficiency of illumination is the sole cause of the disease one should notice that—

- (1) The incidence of the disease is very sporadic. Some men may work for years (11) without suffering, while others, as Llewellyn says, break down within six months. One would expect a higher percentage of cases.
- (2) Some miners who have NEVER worked below-ground are affected.(12)
- (3) If, as many writers have suggested, errors of refraction predispose to nystagmus, it is difficult to understand why nystagmus is not met with more frequently among the non-mining members of the community, for the errors of refraction are not much, if any, more common in miners than in the rest of the population (18).
- (4) Nystagmus is much less common in naked-light pits than in those in which the safety-lamp is necessary. It is true that the

illuminative power of the naked-light lamp is five times that of the safety-lamp, but the danger elements which necessitate the use of the latter are infinitely greater.

The points in favour of the condition being a psychoneurosis are:

- (a) The neurotic predisposition.
- (b) The neurotic colour of the clinical picture.
- (c) The cases in which the condition is brought to the surface by an accident or illness are held by Llewellyn to be "latent." Many of these were, however, previously neurotic. Even if one admits that all were "latent," it has already been shown how easily they may be converted into "manifest" cases by such mental means as suggestion, or by drawing the attention of the men to their condition. Objective signs, as well as subjective symptoms, are thus excited. For instance, the blepharospasm and tremors of the head, which others regard as being the result of the nystagmus, are made to appear through a definitely psychic agency.
- (d) The symptoms and signs accompanying nystagmus at its onset are inseparable from those obviously neurotic ones which follow, and both groups form one indivisible syndrome, related, as a whole, to the nystagmus. The nystagmus appears to be a tremor of but one of several parts of the body which may be affected, whether it be of the eyes, head, hands or, as occasionally happens on excitement or exertion, of the body in general. The nystagmus is aggravated by conditions which aggravate the other tremors and is relieved when they are relieved. Similarly with the other symptoms and signs—being startled while sitting quietly at home aggravates or induces not only headache, giddiness, tachycardia, etc., but also the nystagmus itself in cases in which the latter is absent when the patient is composed.

We have already seen that nystagmus may disappear in time, leaving the other symptoms and signs unabated, and that these other symptoms and signs may be reproduced under the conditions under which the nystagmus was formerly induced.

- (e) There appears to be no essential difference between, on the one hand, "latent" nystagmus and, on the other, psychoneuroses which stimulate the nystagmic signs and symptoms, without nystagmus ever having been observed. A series of intermediate forms occurs and no sharp line of demarcation can be drawn.
- (f) It is now becoming well known that many symptoms complained of by the general population are ascribed to errors of refraction which are actually neurotic (14). Glasses are prescribed and benefit follows, but the glasses employed do not necessarily counteract the refractive error for benefit to be obtained.

(g) The severity of the various symptoms of cases of miners' nystagmus is by no means proportionate to the amount of nystagmus. In the same way, in the rest of the population, the symptoms ascribed to errors of refraction are out of proportion to the degree of error.

In the absence of ocular defects or lesions which could account for the reason why one miner is affected and another is not, under identical conditions, one must look to the mass of evidence in favour of the condition being of psychic origin.

The actual outbreak may be excited by the conditions which are present in the environment. The most prominent of these are the danger element and the deficiency of illumination. The bad lighting constitutes a strong suggestion for the adoption of ocular symptoms (15) as part of the developing psychoneurosis by producing "eye-strain" and fixing the attention of the patient upon his eyes.

By the law of association of ideas, one would expect the idea of difficulty in seeing to be strongly associated with that of danger of personal injury or death. The presentation of one idea recalls the associated ideas. A neurotic person near the breaking-point meets with an accident involving personal injury, and in the psychoneurosis which follows he adopts symptoms referable to the associated idea of injury to the eyes, including especially the symptom which is the most disabling to him in the pursuit of his occupation. Like all the other psychoneuroses, the treatment is to remove the sufferer from the environment in which it broke out (16).

In the first and second forms of nystagmus the symptom which disables the organ concerned is a tremor which, the author maintains, is equivalent to the tremors of the hands or legs seen in the war-neuroses frequently associated, in both cases, with other neurotic symptoms. In the third form a general derangement of function results at the psychical level, just as in the case of the hysterical contractures and palsies of the war-neuroses.

In all the varieties of nystagmus, as in the war-neuroses, nystagmus—or its war-counterpart—may occur without anxiety symptoms, or the latter may be present without the former. The presence or absence of nystagmus would but constitute a variation in the form of the neurosis.

The fact that miners' nystagmus is so widely advertised must play its part in the increased incidence of the disease, and compensation is a not inconsiderable secondary gain from the illness.

It is suggested, therefore, that miners' nystagmus is a psychoneurosis, that its real cause lies within the neurotic constitution of the individual, and that several factors serve to excite the outbreak.

just as in the case of the other psychoneuroses the predisposing cause lies in the past, only the exciting causes being found in the present (17).

## TREATMENT.

Preventive treatment should be directed both against the predisposing and the exciting causes.

Predisposing causes: For the present, treatment will of necessity be confined to exclusion from the industry of all men in whom the presence of a latent neurosis of any sort may be suspected by a physician who is experienced in the psychoneuroses.

At the present time there is no known form of psychotherapy of sufficiently universal applicability that can be employed to render suitable those who would be rejected.

Exciting causes: Improved methods of illumination at the coalface, which are now receiving such close attention, would, if the hypothesis set forth above be correct, still be essential in attempting to eliminate what is probably the most important exciting cause.

At the same time such treatment is merely palliative at the best. Treatment of those already afflicted.—Unfortunately attempts in this direction are only too often unsuccessful. The treatment resolves itself into the methods already mentioned, with such modifications as individual needs demand, namely: (1) Suggestion, waking or hypnotic; (2) abreaction; or (3) a deeper analytical investigation of the psychic determinants, i.e., by the method of free-association; (4) re-educative exercises.

## SUMMARY.

- 1. The clinical picture varies with the mental characteristics of the miners.
  - 2. The mode of onset may be—
    - (a) Gradual, which is the usual course of events: or-
    - (b) Sudden, in which case it is usually determined by injury, local or general, accident or illness, or by the patient having his attention drawn to the fact that he has a latent condition of nystagmus.
  - 3. There are three varieties of the condition:
    - (1) "Latent," in which nystagmus is present without causing any other signs or any subjective symptoms, the patient often being unaware of its presence.
      - (2) "Manifest," with the usual signs and symptoms.
    - (3) Psychoneuroses simulating the signs and symptoms of nystagmus without the presence of nystagmus. Such conditions are usually of the nature of hysteria or the anxiety neurosis, in which symptoms referable to the head and eyes are prominent.

A case in group (1) is easily convertible, by means of a mental stimulus, into one of group (2).

The latter group merges through every intermediate gradation into group (3).

4. In a large proportion of cases a neurotic predisposition to the disease is evident. Pre-existing neurotic symptoms may date back as far as the memory of the patient. Neurotic signs and symptoms may precede, accompany or follow the onset of nystagmus.

Injury, accident or illness may determine the sudden appearance of nystagmus, or may aggravate nystagmus already established.

- 5. The clinical picture is strongly suggestive of that of a neurosis as regards—
  - (a) The prevalence of hysterical or anxiety symptoms.
  - (b) The fact that when obviously neurotic symptoms supervene in a case of so-called simple, i.e., manifest, nystagmus, they are inseparably incorporated amongst those which other writers regard as being secondary to the nystagmus. For instance, tremors of the hands occurred when nystagmus was experimentally induced, and it was impossible to elicit one form of tremor without the other.
  - (c) The fact that many of the so-called secondary symptoms would appear to have a strongly neurotic element in their ætiology—for instance, headache, giddiness and dreams.
  - 6. Nystagmus may take part in an abreaction.
- 7. The course of the case under treatment is a good example of the dependence of the patient upon the physician, so characteristic of hysteria.
- 8. The patient exhibits resistance against the removal of his symptoms, of which he is unaware, and over which he has no control.
- 9. The institution of compensation resulted in an increase in the number of cases certifiable.
- 10. There are at least two factors in the environment which are of paramount importance ætiologically:
  - (a) An element of danger is always present, itself conducive to the outbreak of a neurosis in those predisposed.
  - (b) Owing to the limited illumination below-ground, the men are always working under a RELATIVE ocular disability.

In the author's opinion the danger element determines the outbreak of the neurosis, and the eye-strain the predominantly ocular form.

In groups (1) and (2) of the disorder the symptom which disables the organ concerned is a tremor, and is equivalent to the tremors of the hands or legs in the war-neuroses. In group (3) a general derangement of function at the psychic

level is present, equivalent to the hysterical contractures and palsies seen in the war-neuroses.

- 11. The nystagmus, as well as the other signs and symptoms, is temporarily benefited by psychotherapy.
- 12. It is suggested that, in the future, treatment should resolve itself into that of—
  - (a) Exclusion from the industry of all men predisposed to neurosis of any kind.
    - (b) Improved methods of illumination at the coal-face.
    - (c) Psycho-therapeutic treatment of those already affected.
- (1) Llewellyn, Miners' Nystagmus, pp. 4, 5.—(2) Idem., op. cit., p. 23.—(3) Idem., op. cit., p. 5.—(4) Idem., op. cit., pp. 7 and 134.—(5) Cf. Stassen, La Fatigue de l'appareil Visual, p. 208.—(6) Llewellyn, op. cit., pp. 98 et seq.—(7) Idem., op. cit., Chap. I.—(8) Ernest Jones, Papers on Psycho-analysis, Glossary.—(9) Idem., Treatment of the Neuroses, pp. 41 et seq.—(10) Out of 1,000 cases of war-neuroses which the author has examined 9 had irregular nystagmoid movements of the eyes in the absence of signs of organic nervous disease. Vide Culpin, The Nervous Patient, p. 206.—(11) Llewellyn, op. cit., p. 133.—(12) Idem., op. cit., p. 19.—(13) Idem., op. cit., p. 94.—(14) W. S. Inman in Culpin's The Nervous Patient, Chap. XVI, p. 216.—(13) If a person suffering from organic disease of some particular organ begins to suffer from a psychoneurosis, symptoms referable to the affected organ will be prominent among those of the psychoneurosis.—(14) A close parallel is to be seen in the war-neuroses in cases where an hysterical paraplegia, contracture or other symptom serves to remove the man from an intolerable environment by rendering him incapable of carrying on. Vide Culpin, The Nervous Patient, pp. 175 et seq. Writers' and telegraphists' cramp afford an exact parallel.—(17) Stassen, op. cit., p. 207. Llewellyn, op. cit., Preface, p. viii.

# Clinical Notes and Cases.

A Case of Pellagra. By T. M. DAVIE, M.C., M.D., Assistant Physician, The Royal Hospital, Morningside, Edinburgh.

Mr. C— worked for over twenty years as a maltman in a local brewery. The work was very hard and particularly trying owing to the great heat, and to the dust from the barley which, many a time, he says, almost choked him. It may be of interest to note that not only did he often chew barley, but occasionally would chew maize, which also was used in the brewery.

About ten years after his marriage he gave up this work as he felt himself no longer fit for it. His married life was apparently a happy one, and he has five healthy children, aged 12 to 25. For fully fifteen years he has suffered from what he calls "rheumatic pains," which chiefly affect his legs, and he sometimes needed a walking stick. Apart from a poor appetite he otherwise enjoyed moderately good health. If he had porridge for breakfast that sufficed him. If not, he would take a cup of tea, half a slice of bread, and perhaps an egg. His midday meal consisted of soup, a

small portion of meat and potatoes, and generally a vegetable. His evening meal was generally a cup of tea, with bread and butter and perhaps a small portion of fish. He never ate fruit, and disliked butcher's meat of any kind, only partaking of it very sparingly at times. He took alcohol in moderation and infrequently.

Towards the end of November, 1923, at the funeral of his brother-in-law, he became dazed and unable to walk, and was taken home and seen by his doctor, who said he had had a slight shock. After some weeks he became much worse. He complained of the smell of noxious gas in the room; spoke of hearing wireless messages continually buzzing around him. He became restless and very difficult to manage, said that his identity had been stolen and accused his wife of meaning to harm him. He soon became unmanageable, and was removed on January 9, 1924, to Ward 3 of the Royal Infirmary, where he remained for seven weeks, after which he was certified and brought to the West House on February 24, 1924.

In the infirmary Mr. C— was very depressed. He had lost all taste for things, he said, and was quite content to meet his fate, but never expressed any suicidal tendencies. He said that his wife had been trying to get rid of him by means of gas poisoning. He showed considerable confusion, and was disorientated as to time and place. Physically there was little to note. The pupils were equal, but rather sluggish. Knee-jerks were exaggerated. The Wassermann reaction was negative both in the blood and the cerebro-spinal fluid.

When admitted to West House, he was 58 years of age. Looked ill and exhausted. He was markedly disorientated and confused. He had hallucinations of sound and smell, and fleeting delusions, and was in a state of considerable anxiety and depression. There was considerable stiffness of the legs. Knee-jerks were exaggerated though difficult to elicit. There was abnormal sensitiveness of the soles of the feet, but no Babinski. Epigastric reflexes were very brisk, and he complained of pain in the adductor muscles of the thigh, high up.

#### PROGRESS.

He was kept in bed in the verandah, and it was not long before he began to show some bodily improvement. Within a month of his admission the hallucinations had almost disappeared. The confusion was much less and he was better oriented. With the departure of the confusion his depression became more pronounced. He said that he would willingly end his life, but lacked the courage. He lay in the verandah all summer. It was in August that Prof. Robertson, observing the pigmentation on the back of this patient's hands, suggested that the condition was pellagra. The backs of the hands were glossy and of a yellowish-brown colour. They looked as though they had been varnished. The pigmentation was symmetrical. On rubbing this gently with oil one could see a salmon-pink colour underneath. The face also showed a similar pigmentation, but to a less degree. No erythema had preceded this, nor had the patient ever had a

similar discoloration before. Dr. Cranston Low confirmed the diagnosis as that of pellagra. Attention was now specially directed to providing the patient with a diet rich in protein and in vitamines. This was supplied in the form of Bovril, cod-liver oil, fruit and green vegetables. He protested against this addition to his diet, and saw in it only a new species of torture.

By the beginning of November the brownish pigmentation of the hands and face had almost disappeared. Towards the close of the year patient suffered from intermittent attacks of diarrhœa. At this time no inflammation of the mouth and fauces was present.

1925: In the beginning of the year the general routine was that the patient spent his mornings in bed, getting up in the afternoons, when he walked about slowly, showing considerable spasticity. Several investigations have to be recorded.

Examination of the blood.—Reds, 3,100,000; whites, 4,200; hæmoglobin, 50%; colour index, '8; differential count—polymorphs, 50'6% (neutrophiles 44%, eosinophiles 6'6%); lymphocytes, 48%; large hyaline, 1'4%. A relative lymphocytosis was present.

Dr. W. Susman reported that the red blood-corpuscles showed in many cases definite well-defined colourless homogeneous areas of degeneration. A large number were disintegrating.

Urine.—There were no abnormal constituents and a specimen proved sterile. A renal function test was also carried out and showed considerable impairment of function. The urine was drawn off and 500 c.c. water given. 6 mg. of phenosulphonephthalein were injected. One hour after injection 70 c.c. of urine were passed. 11.5% dye recovered (cf. healthy average 50%). Two hours after injection 112 c.c. of urine were passed, 16.8% of dye recovered (cf. healthy average 20 to 25%). Total for two hours, 182 c.c. urine; 28.3% dye (cf. healthy average 75-80%).

In June a small ulcer on the right side of the tongue was observed, which only caused discomfort when orange-juice or some such acid drink was taken. In the summer months there was no return of the pigmentation of the skin in spite of prolonged exposure to the sun. Patient's weight on admission was 7 st. 5 lb. By the end of 1924 it had increased to 8 st. 1 lb. It declined again to 7 st. 5 lb. in February of this year, but again rose and is at present 9 st.—the highest yet recorded.

There has been little change in the mental state since the departure of the acute confusional state. The patient says he feels very miserable, and would be much better dead. He blames us for his condition and says we just play with him as a cat with a mouse. His expression is one of resigned misery. His skin is slightly yellowish and parchment-like, his forehead wrinkled and his eyes gaze into distance. This far-away look is frequently described in this disease. The ulcer soon took on definite characters of a growth. It slowly extended, to involve the area of the right tonsil. There was no resulting glandular enlargement. Only recently has it given rise to discomfort in the form of earache. Surgical opinion had been

sought regarding this condition. The growth was considered to be of epitheliomatous type, but operation was not desired by his wife.

The knee-jerks are difficult to elicit, equal and diminished. The plantar responses are normal, with the exception that the left has on one or two occasions been ambiguous. A true Babinski has never been elicited. There are no sensory disturbances.

Dr. R. Carmichael reports that the blood picture is now—Reds, 3,660,000; hæmoglobin, 40%; colour index, 55. Whites: polymorphs 6,000; mononuclears, 3,600; total, 9,600. Differential count. Polymorphs: 62.3%; neutrophiles, 57.5%; eosinophiles, 41%; basophiles, 11%; neutrophiles, myelocytes, 6%. Mononuclear: medium, 26.7%; small lymphocytes, 5.7%; large hyaline, 5.3%; total, 37.7%.

Red cells vary slightly in size and are pale in centre, resembling those found

typically in a chlorosis.

Soon after, the cervical glands were invaded and became rapidly enlarged and indurated. There was progressive weakness and emaciation, and the patient died some weeks later with a bronchopneumonia.

Such a case is of great interest. Opinion is still divided regarding the ætiology of this disease. The general trend of opinion is in favour of ascribing the cause to a deficiency of animal protein intake. It is curious to find that this patient was in the habit of chewing maize, but it must also be noted that his dietary was for long deficient, especially in animal protein. In 1921 Prof. Robertson had four cases under treatment in this institution; and again in 1924 there were four cases under treatment, including three women.

In 1909 a Shetland girl in this institution was found to be suffering from pellagra. The case was described by Dr. Dods Brown and Dr. Cranston Low (1). It was the only example of undoubted pellagra then known to have occurred in this country during a period of forty-three years. Only one other undoubted case had ever been reported, and this was described in 1866 by Dr. Howden of the Montrose Royal Asylum.

A number of cases have since been reported, scattered all over the country, particularly in mental hospitals. Probably many cases are undiagnosed. The date of commencement of the pellagrous attack is unknown, but is considered by Miller and Ismail (2) to be about the age of puberty.

I am indebted to Prof. G. M. Robertson, Physician Superintendent, for his help, and for permission to publish this case.

## REFERENCES.

(1) Brown, R. Dods, and Low, R. Cranston.—" Pellagra," Edin.

Med. Journ., September, 1909, p. 197.
(2) Miller, R. S., and Ismail, A. C.—" Pellagra and the Pellagrous Psychosis," Lancet, October 16, 1920, p. 789.

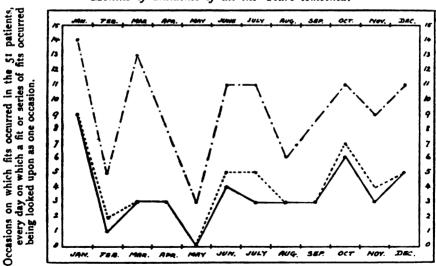
Unexpected Fits. By Gordon F. Peters, M.R.C.S., L.R.C.P., D.P.M., Assistant Medical Officer, Horton Mental Hospital, Epsom.

By an "unexpected fit" I refer to a convulsive seizure of some kind occurring in a patient who had not been previously classified as suffering from epilepsy or general paralysis at the time of the fit.

The clinical records of 2,694 female patients admitted to this hospital during 1920-25 were reviewed, and of these, 43 were found to have had unexpected fits for the first time during this period. Eight more patients had unexpected fits either before, or before and during the same period, full details of which were not available—total 51 cases. The incidence of new cases of unexpected fits in each year compared with the average daily female patient population was as follows:

Year of incidence.		Average daily population.		No. of fresh cases of fits.	Percentage of population.	
1920	•	154		6	•	3.9
1921	•	958		2		•21
1922	•	1391		6		•43
1923		1584		8		•51
1924		1673		14		•83
1925	•	1646	•	7		•43

Months of Incidence of all the Years combined.



· Months of incidence of all the known fits (51 patients).

Months of incidence of the first recorded fits (51 patients).

Months of incidence of the first recorded fits during 1920-1925 (43 patients).

Coincidence and the arbitrary limits of the survey may account for the unusually large percentage which occurred during 1920. For example, two were cases of cerebral hæmorrhage, and one a case of embolism from valvular heart disease. Of the remaining three, one was a case of confusional insanity, one of secondary dementia, and one of dementia præcox.

The patients were not in residence at Horton during the whole of 1920, but were all transfers from other institutions, and while they form a relatively large proportion of the daily average number of only 154 they form a much smaller proportion of the daily average number with whom they were associated during the whole of the year.

It was found that the fits had occurred during the course of the following forms of mental disorder:

Mental	Number admitted.	Number who had fits.			Percentage.			
Mania .				276		13		4.71
Melancholia	•			382		7		1 ·83
Confusional	insanit	У		181		6		3.31
Dementia pr	æcox			148		12		8.11
Secondary	and	S	enile					
dementia				409		10		2 · 44
Non-systema	atic de	lusi	onal					
insanity				259		3		1 · 16

Of the 43 cases in which the fits occurred for the first time during 1920-1925, the lesions immediately responsible for the fits could be assigned with reasonable certainty in 19, namely:

Cerebral hæmorrhage, 4; cerebral softening and senile decay with cardio-vascular degeneration, 7; uræmia, 2 (one of these was a case of myxædema); and embolism from valvular disease of the heart in 6 cases.

The ætiology of the fits in the remaining 24 cases, namely in 55.8% of the whole series, was more obscure. However, they were all in impaired health from various debilitating causes. Fourteen of them were suffering from definite physical disease, such as tuberculosis, broncho-pneumonia, and cardiac valvular incompetency; and others from less defined conditions like severe diarrhæa, pyrexia of unknown origin, etc.; while the other 10 showed symptoms of debility which were attributed primarily to their mental state, but which were aggravated by—or were aggravating—bodily infirmities which were already present.

In all the patients the mental symptoms were very severe at the time of the first fit, and no fits were recorded in convalescent patients, or during a quiescent interval in the case of any patient.

In 12 of the 24 cases in which the cause of the fit was

problematical, conditions were present which are commonly held to be capable of causing fits in certain circumstances; but whether they were factors in the ætiology of the fits in the particular cases under review would be a matter of opinion. The conditions referred to are tuberculosis, cardiac debility, and mitral regurgitation, chronic interstitial nephritis, and otitis media. In the last case it was particularly doubtful if there was any connection between the otitis and the fit, and there were no sufficient grounds for suspecting the presence of a cerebral abscess. The patient was a case of marked exophthalmos with chronic mania, and had some tremor of the hands. Her thyroid gland was easily palpable.

The cause of the fits in the other 12 cases was even more problematical, since they presented no well-known and demonstrable fit-causing lesions; 8 of them, however, were cases of dementia præcox, one acute mania, one acute melancholia, one dementia following depression, and one confusional insanity. These latter 4 cases all showed signs of endocrine disturbance among their most prominent clinical features.

It is presumed, in the light of modern research, that cases of dementia præcox have some disorganization of the gonadal endocrine secretions, which would suggest that all 12 cases stood in some common pathological relationship.

For the purpose of comparison a clinical description of these 4 cases is appended:

CASE I.—A masculine-looking woman, very tall and angular, with an expressionless and somewhat acromegalic facies; 49 years of age when she had the fit. She had puerperal insanity at the age of 24, and a hysterectomy was performed at the age of 37.

CASE 2.—She became very depressed a fortnight after the birth of her baby, and grew gradually worse. Her thyroid gland was enlarged, but there was no exophthalmos. She became more restless and violent, and attempted suicide, and her condition caused grave anxiety for some months on account of exhaustion. Finally she had a sudden pain in the chest—which was described as anginoid—with dyspnœa, and died. Post-mortem examination showed the heart to be atrophied.

CASE 3.—She had been involved in a train accident twelve months before admission in which she was pulled along for about 50 yards. On admission she had exophthalmos and very marked tachycardia. The catamenia had ceased from the age of 35—a year before the accident happened. Following mental excitement there was considerable exhaustion just before the fit. She had suffered from influenza, neuralgia, catarrhal laryngitis and frequent headaches, but these all occurred at least some months before the fit. Just before the influenza—which occurred nearly four years before the fit—she had had a syncopal attack, preceded by pain down the left arm.

CASE 4.—She suffered from psoriasis and had a year's course of thyroid extract. It had been discontinued a year and seven months before the fit occurred, because of tremulousness and tachycardia. Her ankles were always blue and puffy, but the condition was not cedema. It felt like the subcutaneous masses found in myxcedema, to which it was in fact ascribed.

Regarding the 8 patients who had unexpected fits for the first time before 1920, associated conditions were, so far as the somewhat meagre clinical histories show, similar to those found in the other 43 cases. Thus in one case exhaustion from mental disease was noted; in another, exhaustion from diarrhæa; in two others morbus cordis was present; and in one, advanced senile decay. Two of the patients were cases of dementia præcox, and in one other case the bodily health at the time of the fit was not known.

Throughout the whole series it was noticed in many instances that the fit occurred shortly after removal to strange surroundings—such as admission to hospital, or to another ward in the same hospital—but this circumstance is rendered less significant by the fact that the removal itself was often made necessary by an exacerbation of bodily or mental symptoms which preceded the fit.

Taken as a whole, considerable mortality followed the fits at varying intervals. Of the 43 cases of fits first observed during 1920–25, 26 died within the same period. Of the 8 cases known to have had their first fits before 1920, 3 died within the period 1920–25, a total of 29 out of 51.

A post-mortem examination was made in 26 cases out of the 29. Some of the brains, thyroid glands, adrenals, pituitary glands and ovaries were not examined locally, as they had to be sent away for research purposes; but in those examined the conditions found were compatible with the clinical evidence.

## SUMMARY AND REMARKS.

The fits were mostly general convulsions of the epileptiform type; several resembled typical attacks of major epilepsy. In others the convulsions were somewhat less generally distributed, and in one case there was only spasmodic twitching of one limb and the face, in addition to the state of coma.

After excluding the 19 cases which had a definite causation, and excluding 8 cases about which the information was scanty, the cause of the fits was considered to be obscure in 24—namely in 55.8% of the series. All these 24 cases had some debilitating physical states, and all had well marked mental symptoms.

· Twelve out of the 24 had conditions which are known to be associated with epilepsy in certain circumstances, and 4 were cases of dementia præcox. Of the 12 remaining, 8 also were cases of dementia præcox; and 4 had symptoms strikingly suggestive of disturbed endocrine balance.

In the whole series there were only 2 other cases showing signs of endocrine derangement to a marked degree. One of them was a case of myxædema whose fit was definitely due to uræmia, and the other was a case of chronic mania with otitis media; but although otitis media may lead to fits, it was extremely unlikely, on

clinical grounds, that it did so in this case. This patient had exophthalmos in a very marked degree and a fine tremor of the fingers, and her thyroid gland was easily palpable.

The numbers concerned are small; but so far as they go, and after excluding those cases which presented lesions commonly associated with epilepsy, 66% of the remainder were well-marked cases of dementia præcox, and 33% strongly suggested a disturbance of endocrine balance. There would therefore seem to be some justification for the presumption that, in the only cases which lacked potential and ascertainable fit-causing lesions, disturbance of the endocrine secretions of the thyroid gland and ovaries took their place. Moreover, there was no reason to suppose that there was any other more definite pathological factor in common than this, which it is highly suggestive of some connection between endocrine disturbance and the incidence among the insane of "unexpected fits."

Hypocholesterinæmia in Dementia Præcox. By W. Leonard Forsyth, M.B., Major I.M.S., Pathologist, East Sussex County Mental Hospital.

The importance of blood-cholesterol has recently been the subject of investigation in disease. The hypercholesterinæmia associated with gall-stones is now well known, and recent contributions to surgery by Sir Berkeley Moynihan confirm an opinion hitherto held that in gall-stones the blood-cholesterol content is high. Experiments show that in vitro cholesterin is deposited in broth in which Bacillus coli is grown, and it is assumed that something similar takes place in the gall-bladder in the formation of calculi.

The origin of cholesterol in blood is not yet fully understood. A normal value of 0.16% has been assigned to it, in older persons rather more than this, but much concerning its metabolism remains to be worked out. It may have, like uric acid, an endogenous origin, or it may be taken into the body in such food as brain, eggs, fat, certain vegetables, etc.

The central nervous sytem, the cortex of the adrenals and the corpora lutea are richest in cholesterin.

Flint, of New York, sixty years ago, thought it was formed in the brain and passed into the circulation. Laroche and Grigaut in 1913 disproved this by experiment. Mott considers it is carried to the brain to build up myelin. The adrenal cortex and corpora lutea are considered by some as contributing to its origin, while others consider it is merely stored in these organs, having its origin elsewhere. The exogenous cholesterin maintains a more or

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less constant blood-level, and it is difficult to induce an artificial hypercholesterinæmia. In certain conditions of disease, notably obstructive jaundice with hepatic insufficiency, it accumulates above a normal figure, and this may depend on diminished excretion. The literature contains much concerning hyper-, but very little in regard to hypo-cholesterinæmia in general, and I have not seen any reference to dementia præcox in particular. As the adrenal in this disease does not function normally—we may assume this from its abnormal histological picture—it seems to me important to ascertain if this is in any way reflected in the blood-cholesterol content.

The following estimations are taken from typical dementia præcox patients and others at the same time as controls. The actual estimations were carried out by Dr. Cecilia Shiskin, of Leeds University, and I am most grateful to her for the work done, also for her interest and advice.

Cases: Po. 0.123%, Ca. 0.129%, Co. 0.116%, Bro. 0.133%, Dow. 0.111%, Cla. 0.126%, Bra. 0.143%, Bi. 0.13%, Th. 0.151%. Su. 0.14%, St. 0.148%, Br. 0.157%, Ph. 0.135%, Cow. 0.152%, Fer. 0.111%, Har. 0.1%. Controls: A series of controls from patients other than dementia præcox cases gives an average of 0.177%.

Warr. 0.167%. On admission ? dementia præcox, but now delusional insanity.

Burl. 0.206%. Not dementia præcox.

DeM. 0.211%. Not a typical dementia præcox.

Smit. 0·13%, Luc. 0·121%, Hi. 0·103%, Pe. 0·098%, Cl. 0·127%, Str. 0·116%.

It is apparent from these unselected cases that the content is less than normal. What the significance is we do not know but there is just the possibility that it may have some bearing on diagnosis and treatment. This is merely published as a preliminary note, and it is hoped to elaborate it by further work in the near future. I am indebted to Dr. F. R. P. Taylor, Medical Superintendent, for permission to publish it.

# Occasional Notes.

The Reports of the Proceedings of the Conferences (a) On the Nursing Service in Mental Hospitals, and (b) On the Provision of Mental Hospital Accommodation (England and Wales).

We dealt very fully with the Report of the Board of Control's Committee on Nursing in our April number of last year, and we have since received the report of the proceedings of the Conference called by Sir Frederick Willis, Chairman of the Board of Control (England and Wales), on April 21, 1925, to consider the nursing service in mental hospitals with special reference to the recommendations contained in this report. At the Conference discussion ranged round various aspects of the subject selected by the Board, with opening speakers and the reading of papers as part of the arrangements.

A copy of the report of these proceedings has been widely circulated, and it is only necessary for us to record the subjects discussed and the names of those who opened the discussions, and these were—

- i. Grading of Staff, by Dr. H. D. MacPhail.
- ii. Training, by Dr. W. F. Menzies.
- iii. Remuneration, by Dr. M. A. Collins, O.B.E.
- iv. Hours of Duty, by Dr. G. Clarke and Dr. R. Eager, O.B.E.
- v. Supply of Suitable Candidates and Conditions of Service, by Dr. H. Devine, O.B.E.
- vi. Nursing of Male Patients by Women Nurses, by Miss Perry, Matron, Cardiff City Mental Hospital.

The general discussion which followed was opened by Prof. G. M. Robertson, from Scotland, who was very cordially welcomed by the Chairman on behalf of the Conference. As would be expected, he dealt chiefly with the nursing of male patients by female nurses.

Although the Conference cannot be said to have thrown much further light on the subject as a whole than is to be found in the report of the Committee, and though many points in the latter report were severely criticized, it has enabled the Board to make a wise selection from the Committee's recommendations, which are embodied in a circular letter, No. 677, dated January, 1926, of which we now give an excerpt:

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- "Grading.—The staff should be graded as follows:
- "A—(i) Matron, (ii) Assistant Matron, (iii) Sister-Tutor, (iv) Night Sister, (v) Sister, (vi) Staff-Nurse, (vii) Senior Probationer, (viii) Probationer.
- "B—(i) Chief Male Nurse, (ii) Deputy Chief Male Nurse, (iii) Night Charge Nurse, (iv) Charge Nurse, (v) Staff-Nurse, (vi) Senior Probationer, (vii) Probationer.
- "So long as the office of head female nurse is retained, it is suggested that the person holding it should be known as Staff Sister or Staff Charge Nurse as the case may be.
- "Qualifications.—The posts of Matron, Assistant Matron, Sister-Tutor, Night Sister, and Sisters of sick and admission hospital wards should be held by persons who are certificated or registered in both general and mental nursing, the posts of Sister in other wards and Staff-Nurses by nurses who are certificated or registered in mental nursing, and that nurses should only be recognized as senior probationers when they have passed the Preliminary examination.
- "Visiting Committees will, naturally, not desire to do anything which would seriously prejudice the career of any nurses now in their employment who by character, experience and ability have proved themselves fitted for promotion; and although the Board think that, in the case of future entrants, the rules set out above should be strictly followed, they consider that some concessions may properly be made to existing nurses possessing the qualities mentioned.
- "The Board wish to state that they regard it as essential that either the Matron or the Assistant Matron and the Sister-Tutor and the Sister in charge of sick wards should be doubly trained. They recognize that at first it may not always be possible to find doubly-trained nurses to fill these posts, and if such cases should arise it is suggested that the nurse provisionally appointed should only have 'acting rank,' and that a substantive appointment should not be made until the Committee are able to appoint a suitable person with the requisite qualifications.
- "Exceptions to the appointment of doubly-trained nurses to the posts of Night Sister and Sister in charge of Admission Wards might be considered if the applicants have completed some years' satisfactory service in mental hospitals, and are by character, experience and ability particularly fitted for the posts.
- "Every possible encouragement should be given to existing Sisters and Staff-Nurses, certificated or registered only in mental nursing, to complete their training in general nursing, and so to qualify themselves as candidates for the more important posts;

this can best be done by entering into an arrangement with some general hospital, recognized as a Training School, and preferably within the area served by the mental hospital.

- "The facilities for giving men general hospital training are as yet too imperfect to make it practicable to suggest the appointment of doubly-trained male nurses for the higher posts, but the Board would like to see efforts made to induce general hospitals, under suitable arrangements, to accept men as Probationers for training in general nursing.
- "Entrants to Mental Hospital Nursing Service.—The Board are of opinion that it is desirable in the case of all mental hospitals that a certain percentage of future entrants should have undergone full general hospital training before entering a mental hospital. Such candidates should enter as Senior Probationers at a higher initial salary than is given to Senior Probationers not so qualified.
- "Every facility and encouragement should be given to nurses to become certificated in mental nursing, and no promotions to Staff-Nurse or any higher grade should be made unless the candidates possess this qualification.
- "Nursing of Male Patients by Women Nurses.—The Board have no doubt that there are many male patients who can be nursed by women nurses with great advantage, and they agree with the Departmental Committee in thinking that the practice should be more widely extended than at present.
- "Remuneration.—It is essential if the status of the service is to be raised, to provide that the higher posts, and especially those for which double training is necessary, should be adequately remunerated; and the Board hope that these posts will come to be regarded as prizes in the profession of nursing.
- "Recreation, etc.—The Board also wish to emphasize the importance of securing the general contentment of the patients by providing them with occupations, amusements and recreations. Successful endeavours to meet these needs have already been made in some hospitals by the appointment of voluntary 'Patients' Friends' and paid 'Occupation Instructors,' and the Board hope that similar appointments will become general.
- "Housing of Staff.—It is desirable to provide, wherever practicable, separate Nurses' Homes or Hostels, at some distance from the patients' quarters, with reading and recreation rooms, messrooms and kitchen, and adequate arrangements for outdoor recreations.
- "Untrained Staff.—It was suggested at the Conference on April 21 that hospitals should engage for training in mental nursing only fully-trained general hospital nurses, and that side by side with the strictly nursing staff there should be a social staff of

'Companions' endowed with practical aptitudes specialized by appropriate training. Experience alone would show how far this suggestion could be adopted in place of the present system, but the Board would warmly welcome a trial being made."

The second Conference took place on the following day, April 22, the subject being the ways in which the need for increasing mental hospital accommodation in England and Wales could be best met. A procedure similar to that of the previous day's conference was adopted, and debates on various aspects of the subject were opened as follows:

- i. Extended Use of Poor Law Accommodation under Section 25 and 26 of the Lunacy Acts, 1890, by Dr. Bates, of the Lancashire Asylums Board.
- ii. (a) Sending out on Trial under Section 55; (b) Boarding-out under Section 57; (c) Discharge to Relations under Section 79, by Mr. Godwin King, Chairman, Hellingley Visiting Committee.
- iii. Building at existing Mental Hospitals (a) Admission Hospitals with Villas for Convalescents, (b) Nurses' Homes, (c) General Enlargement, etc., by Dr. G. F. Barham.
- iv. Regional Conferences, by Mr. C. L. Forestier-Walker, M.P.

A general discussion followed. To the detached onlooker the whole proceeding gave the impression of a gathering of men and women bent on ascertaining not only how to make bricks without straw, but also without clay. Still, on the whole the opening papers were full of practical suggestions, and went to show that before further building operations were undertaken there was a case for further exploring the existing methods under the Lunacy Acts of dealing with the accumulation of the chronic insane, and if building operations were eventually found necessary, Dr. Barham's opening speech gave a true note as to the most useful directions in which this could be undertaken.

We trust that the suggested regional conferences will ultimately materialize, and this reminds us that a complete scheme for the setting up of regional advisory committees on all matters relating to housing, treatment, and prophylaxis of the mentally afflicted was placed before the first Lunacy Conference by Lt.-Col. J. R. Lord, and which amounted in practice to regional conferences, seemed to have escaped the attention of Mr. Forestier-Walker.

The whole subject which engaged the attention of this Conference is beset with difficulties, the basis of them chiefly being the state of the Lunacy Law on certain matters and the economic situation we still find ourselves in as a nation.

It is to be remembered that in the old days the insane were looked after almost entirely by the Poor Law Authorities, and nearly all the special Committees of the House of Commons or Commissioners-in-Lunacy, the Reports of which are valuable documents and usually ushered in improvements in the administration of lunacy and the treatment of the insane, have been unanimous that insanity is not in itself a matter for the Poor Law Authorities who had very different ideals from those of to-Without any deprecation of the fine work done by the Poor Law Authorities nowadays, our Association thinks it is advisable that the indigent mentally afflicted person should not, of necessity, come under the Poor Law in order to receive treatment. The great majority of the insane, by various Acts of Parliament, have been taken away from Poor Law administration, as regards care and treatment, and only weak-minded people are now left to them permanently.

The magistrates were first given this responsibility, and under the Lunacy Act of 1808 they commenced to build those public mental institutions which are now generally known as mental hospitals. A further advancement came in 1888, when the Local Government Board Act of that year came into operation, and the care of the mentally afflicted was selected by the Government to be one of the duties of the newly created county and borough councils.

It is obvious that the care of the mentally afflicted is the rightful heritage of the county and borough councils, and they should not surrender it without very good reason, and not merely for economic reasons. If the Poor Law Authorities have suitable vacant buildings, the county and borough councils might rent them. If the latter cannot rent the buildings, then, there is a section in the Lunacy Act which permits them to hand over temporarily suitable patients to the care of the Poor Law Authorities, and in the contract they can dictate as to the patients' treatment, and thus carry out in some measure their obligation under the Lunacy Acts.

The insane, if not paid for by private individuals, need to be maintained out of the public purse; and there is no particular advantage to the rate-payers in transferring the responsibility for expenditure from one rating authority to another.

But there is the question of dual control in the care of the insane. In the handling of an immense social problem like the mentally afflicted, its medical side, its sociological side, particularly as regards prophylaxis, dual control is a calamity. This view was taken by our Association in their evidence before the Royal Commission.

As to various expedients which were put forward at the Conference

to meet the economic stress which exists at this moment, no doubt districts vary a good deal as to their immediate needs. advantage of discharge on trial and boarding out sections of the Lunacy Acts is that the Visiting Committee remain in control of the patient, and is still able to exercise some supervision. right for public authorities to evade their responsibilities under these Acts, which were created for the expressed purpose of seeing that persons who, by reason of mental disorder, could not look after them themselves, were properly looked after by others. As regards section 79, to flood the country with half-cured or chronic lunatics by the use of this Section merely for economic reasons, would not be carrying the principles underlying the Lunacy Acts or the national will. The difficulty is that immediately a person is discharged under this section he is a free man—he can do what he likes, he can go where he likes; so long as he is an orderly person, neither his relatives nor the police nor anybody else have any control over him.

Such being the case the two sections permitting respectively of patients being sent out on trial and of being boarded-out—are the two better sections. The latter section has been burdened with so many administrative difficulties that it is very largely a dead letter.

Now as to sending patients out on trial—a visiting committee has not the power to allow a patient out on trial practically indefinitely. They must fix the periods of trial, but there is nothing in the Lunacy Acts to prevent such periods being renewed time upon time.

Patients sent out on trial need not be limited to those who are likely in due course to be discharged as recovered. At some hospitals no patient is discharged without advantage being taken of Section 55; and they are sent out for various periods of time. When they return they are either dealt with as recovered, or they may be sent out under Section 79, or the trial extended, or they may be retained in hospital. The main difficulty of Section 79 is that unless an expert person examines the environment to which the patient is going, visiting committees have some hesitation in acting. If an unrecovered patient sent out on trial, say for six months, has, at the end of that time done well in home surroundings, and on return he is still not sufficiently mentally well to be discharged as recovered, then the visiting committees can have no hesitation in using Section 79, if it is not desirable to prolong his period of trial.

Now with regard to additional mental hospitals or the enlargement of existing mental hospitals. Naturally, in view of the sitting of a Royal Commission to consider the best way of caring for and dealing with early cases of mental disorder, etc., local authorities will hesitate to expend money in building. Of the various buildings local authorities might put up, undoubtedly it would be safer to enlarge the present mental hospitals in the direction of buildings specially suitable for recent and acute cases, and this will be more economical in the long run.

We are not obsessed with any ideals except practical ones, but we want all patients to have the best possible treatment; we want every insane person, however long he has so suffered, to be searched for every possible cause of his disorder, and every avenue of treatment to be explored, before being considered incurable.

As to the question of nurses' homes, we have already spoken of the great advantage of separate buildings for this purpose. In the big hospitals there are at present many wards converted into cubicles for nurses, which could thereby revert to the accommodation of the patients, and thus help to lessen the existing overcrowding.

# Prof. Emil Kraepelin.

THE Psychiatrisch-Neurologische Wochenschrift, edited by Dr. Joh. Bresler, has commemorated the occasion of Prof. Kraepelin attaining his seventieth birthday in 1926 by the publication of articles appreciative of his career as one of the outstanding figures in the history of modern psychiatry.

In recent numbers articles have appeared from the pen of Sir Frederick Mott, as President of the Royal Medico-Psychological Association and from Prof. G. M. Robertson, who kindly undertook this duty on behalf of the Editors of the Journal of Mental Science. Both articles are educative and illuminating, and the Association will be grateful to the authors for the manner in which these duties have been carried out.

We have much pleasure in reproducing these for the information of members, but as regards Sir Frederick Mott's article, we regret space only permits us to reproduce the introductory remarks.

Sir Frederick Mott, K.B.E., F.R.S., writes as follows:

I esteem it a privilege to have been asked as "President of the Royal Medico-Psychological Association" of Great Britain and Ireland to contribute to the Fastschrift in honour of the seventieth birthday of the illustrious Prof. Kraepelin.

Personally, and on behalf of the members of the Association of which I have the honour to be President, I desire to offer cordial congratulations to Prof. Kraepelin and, at the same time, to express gratitude and admiration for the great pioneer work he has accomplished in psychiatry. We realize the

world-wide influence he has exercised as a clinician and a teacher at the Psychiatric Institute (Deutsche Forschungsanstalt) of Munich. He has correlated his clinical teaching of dementia paralytica and dementia præcox with the very important pathological discoveries of his late colleagues Nissl and Alzheimer, which tend strongly to support Prof. Kraepelin's views of the physiogenic origin of the latter disease, in opposition to the psycho-analytic psychogenic teaching.

The neuro-pathological and serological investigations of Spielmeyer and Plaut, which are now and have been in the past carried on in the Munich School inspired by Prof. Kraepelin, maintain the same high standard of originality and accuracy as the work of their predecessors.

The importance of the correlation of clinical and laboratory work finds full recognition in his great text-book on *Psychiatrie*, which has spread its light over the whole world, and exercised everywhere a great stimulating influence in this direction.

Thus my observations on the condition of the reproductive organs when making post-mortem examinations led me to the conclusion that various bodily anomalies, such as fibrotic ovaries, small testes, and other conditions, occurred much more frequently in cases of dementia præcox than in other mental diseases. Again, the frequency with which these patients succumbed to tuberculosis, as compared with patients dying of paralytic dementia, led me to the general conclusion fifteen years ago that the principal factor of this disease was an innate disposition, a low vital resistance. My clinical experiences accorded with the above-mentioned pathological conditions. I naturally turned to the standard work of Prof. Kraepelin, and found that as regards external causes such as mental stress, infections, alcoholism or syphilis in the patients he considered the evidence unsatisfactory. But he said: We stand perhaps on a somewhat firmer foundation in the consideration of the relations between dementia præcox and reproduction. Apart from the fact that disorders of menstruation are frequent and, moreover, exacerbations of the morbid process are often observed during the menses, dementia præcox begins in a considerable number of cases during pregnancy, in childbed, or often in a miscarriage, sometimes also first in the period of lactation. In Heidelberg I saw nearly a fourth of the catatonic cases in women develop in connection with reproduction, while of the hebephrenic cases not one-tenth occurred.

I found that Prof. Kraepelin did not consider that onanism was the cause, but rather the result of the mental condition. Moreover, I learnt that he considered the morbid anatomy disclosed, not simple inadequacy of the nervous constitution, but distinctive morbid processes. And stimulated by the opinion of this great authority, I was led to undertake two lines of research: one regarding hereditary predisposition, the other a comparative systematic histological survey of the reproductive organs in both sexes, and this investigation was further extended to the pituitary, adrenal and thyroid glands.

I have summarized these researches in the latter part of the Harveian Oration delivered at the Royal College of Physicians in October, 1925. Moreover, I have endeavoured to put forward a biogenetic explanation of the causes of schizophrenia occurring in dementia præcox.

# And Prof. George M. Robertson, M.D., F.R.C.P.Edin., as follows:

Seventeen years ago Prof. Emil Kraepelin was elected an Honorary Member of the Medico-Psychological Association of Great Britain and Ireland, now the Royal Medico-Psychological Association, and this fact of itself in the most convincing manner indicates the high esteem in which he is held as a psychiatrist by those in this country who are in a position to judge.

Professor Kraepelin's genius has adorned many departments of psychiatry, but it is with his work on dementia præcox that his name and his reputation are most closely linked in our minds. As a nation we are not impressionable, not easily convinced, nor readily moved, and in no country has there been less inclination to accept his doctrines without qualification than in this. The older psychiatrists were most reluctant to discard the clinical ideas of their generation. Prof. Kraepelin's masterly summary of the symptoms met with in this disorder, if it has not carried final and complete conviction to the minds of all, has at

least captured our attention, and it is generally admitted that he has substantiated his main thesis.

The identity of Clouston's "Secondary Dementia of Adolescence" with the chief forms of dementia præcox is recognized, but whereas Sir Thomas Clouston regarded some cases of adolescent insanity as being of an unfavourable type which often ended in dementia, he did not separate these from cases of manic-depressive insanity. Prof. Kraepelin, on the other hand, regarded these cases from the initial symptoms onwards as being examples of a distinct form of disease, namely dementia præcox. Whether this hypothesis has been proved to the hilt or not, Prof. Kraepelin has enabled us to differentiate with a great degree of success between those cases occurring at the adolescent period which terminate favourably and those which do not.

Dementia præcox has excited more interest and speculation than any other form of insanity in our time. The opinion is frankly recorded that no conception dealing with mental disease, advocated during the last fifty years, has been more fruitful of beneficial results than that of dementia præcox. Out of a symptomatology which before had been chaotic and disheartening, Prof. Kraepelin evolved a scheme which, if it did not introduce perfect order, certainly marked a very great advance. And not the least of the benefits that psychiatry has derived from him has been the greater accuracy of observation that his views have enforced upon all clinicians who desire to make an exact diagnosis or prognosis.

Now that general paralysis of the insane after a century has yielded up most of its secrets, by far the most important problem facing the community in the domain of mental hygiene is that of dementia præcox. How to avert this dementia is the cardinal problem of psychiatry.

We all join in honouring Prof. Kraepelin, who, along with much other work, has done more to give us an understanding of the nature of this distressing malady than any other person.

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# Part II.—Reviews.

An Outline of Psychology. By William McDougall, F.R.S. London: Methuen & Co., Ltd., 1923. Demy 8vo. Pp. xvi + 456. Price 12s.

(Continued from vol. lxxi, 1925, p. 570.)\*

Before commenting on the third and fourth of the four parts into which we found it convenient to roughly divide the contents of this work, let us look at the basis upon which Prof. McDougall builds his psychology from a somewhat different angle.

In his introductory chapter he sketches the history of psychologyt

- \* This, strictly speaking, is more than a review, and is expressly written for those readers who have not yet had time or opportunity of studying in a wider sense the problems raised by Prof. McDougall.—[Eds.]
- † The word "psychology" did not come into use until the end of the sixteenth century, and according to Hamilton its true author was one Rudolphus Goclenios of Marburg, who issued a work under this name in its Greek form in 1594. It is preferable to "philosophy of mind," or "phenomenology of mind," etc., because it avoids a plurality of words and can be used adjectively.

under sections dealing with historical hypotheses. Everywhere he rejects root and stem all hypotheses of mind which give any support to mechanical notions in regard to mental processes and human behaviour, also the doctrine of hedonism as a basis of psychology.

"All the varieties of psychology which propose to abdicate in favour of a mechanistic physiology, which propose to replace the hypothesis of a mind, a soul, a self, a subject, an experiencer, by that of a brain or a bodily organism working on strictly mechanical or physical principles (that is to say, behaviourism, sensativism, associationism, presentationism), may be conveniently classed together as mechanistic psychologies. (These psychologies are not necessarily mechanistic, but they readily lend themselves to such a conception.) All of these are based upon certain assumptions which, though they have a certain plausibility, have not been justified by the best efforts of those who make them so confidently" (p. 30).

He points out that there is nothing to be gained by substituting "the brain" for "the mind." Such a course unduly limits our freedom of thought and ties us down to one kind of explanation.

The psychology of pure experience is condemned as sterile, and when combined with faculty psychology is but little better. Its great rival, the psychology of ideas, associated with the name of John Locke, having played a useful part in the past is no longer considered profitable, and its continued use is unjustifiable.

He traces its development from its original standpoint of the mind being a stage or scene for ideas (presentation almost means the same as "idea" and denotes also "sense-perception") to being (I) composed of a "mass of 'ideas,' unconscious or subconscious for the most part, but passing in turn into the conscious condition," and (2) to it being thought that under the stage was a dark chamber in which "ideas" are stored, from which they issue and appear upon the stage, which is illuminated by consciousness, the place of emergence being called "the threshold of consciousness." He goes on to say:

"My own opinion is that any service performed by these confused and confusing fictions (namely, the 'ideas,' the dark and the illuminated chambers of the mind, 'the threshold of consciousness,' and 'consciousness' as a light which illuminates 'ideas') is far outweighed by the vast mass of confused and loose thinking which they have engendered. They should be sternly banished to the psychological museums. Yet they still thrive; as we see in the Freudian psychology, which has flourished so greatly of late years, and in the usage of many writers of other schools" (p. 15).

It should not be assumed from this that our author is not appreciative of Prof. Freud's great work, as is shown by the following abstract from the report in *Psyche*, referred to in the early part of this review:

"The mechanical psychology, the intellectualistic psychology, and the hedonistic psychology, these three psychologies, which were the prevailing fashions of the nineteenth century, were of little or no use to the student of mental disease. In consequence mental medicine, or psychiatry, was at a standstill. The genius of Freud, disregarding all these traditional psychologies, introduced a psychology

of which the keynote is purposive striving, a hormic psychology which operates not with mechanical reflexes, and not with such vague inert abstractions as sensations and ideas, but with active purposive tendencies, impulses, desires, longings and strivings; and psychiatry at once began to make, and continues to make, great strides."

He disclaims, however, that he is a Freudian, and though one cannot be both a Freudian and a Watsonian behaviorist, no one is called to choose between these two doctrines, for there is an alternative, which is psychology.

Psychology as the science of consciousness is severely criticized. The word "consciousness," he says, "is a thoroughly bad word," because it cannot be used as a verb, and the deep havoc wrought by its use is largely due to our tendency to reification of objects we think and speak of, especially when we do so by the aid of a word of substantival form. If it be used as synonymous with "experience," it must be admitted that the latter is a much better term, for "experience implies someone who experiences and something which is experienced by the experiencer." The outcome has partly been the atomistic or mosaic psychology. Consciousness became a kind of stuff, but not of uniform texture, rather a mosaic or piece of tapestry, the pattern always changing, the irreducible atoms being sensations or sensory elements and still finer atoms, mind stuff or mind dust. Some carry their fantasy still further and identify the whole universe as made up of this stuff, and finally argue that the stuff they call "consciousness" is of two forms, "conscious consciousness" and "unconscious consciousness."

A fusion of atomistic with idea psychology was a foregone conclusion. "Ideas" were accepted as things and became "sensory elements," and thus the basis of sensationist psychology was laid. Then "matter," "consciousness," "ideas," "sensation" all became stuff. Would one not be justified in saying that this "consciousness" is not only stuff, but nonsense? Prof. McDougall is constrained to ask. Some have done so and concluded that consciousness is an illusion, a fiction. Some have raised in its place a new philosophy they call "neo-realism," meaning that ideas, perceptions, etc., are identical with objects of the physical world.

"Thus the wheel comes full circle, and we are brought to the position from whch Locke started out—'ideas' are once more the things of which a man thinks; that is to say, they are identical with all 'the furniture of earth,' while 'the choir of heaven,' including all such things as minds, souls, selves, or spirits, with all modes of activity and experience, is left out from the picture of the universe" (p. 19).

Fortunately this final evolution has not been achieved by most of the exponents of "ideas," "consciousness" and "sensationism," but in order to understand their present position Prof. McDougall devotes some pages to the consideration of the influence of physiology on modern psychology.

For the purposes of this review it is not necessary to enter in

detail upon a history of physiology,\* but it may be remarked in passing that it is inextricably bound up with that of general medicine, and we are indebted to the Medical School of Cos, made justly famous by the teachings of Hippocrates (460–361 B.C.), for the first body of physiological conceptions, howbeit almost entirely speculative. These ancient Greek physicians at Cos recognized that the brain was the organ of the mind in both health and disease, and in regard to general physiology built up a speculative structure upon which they based their humoral pathology.† Their teachings marked the end of the traditional, magical or superstitious period of ancient medicine and the dawn of empiricism and natural causation.

With Plato (429-347 B.c.) arose the philosophical conception of the vital principle as an entity or a series of entities superimposed upon the organism. He taught that there were three souls resident in the body and a universal soul outside the body. His pupil Aristotle, the father of biological sciences, differed from Plato in that he taught "vitalism" from the point of view of not being in the organism but identical with it—the mind was the highest form of life. He was a cosmological realist while Plato was an ontological idealist. He was the Prince of Teleology, and the precursor of dynamic and hormic conceptions in modern psychology. His soul faculties of nourishment, sensation, desire and thought, the latter being divided into creative and receptive, were all dynamic and not hypostasized abstractions. Galen's (131-210 A.D.) teachings were a mixture of Hippocratean and Platonic notions. The Arabian physicians and philosophers added nothing to the advance of physiology. They succeeded in subverting the teachings of Aristotle to Platonism, which fitted in admirably with their own superstitions. With Galen, they were responsible for the Platonic functional trinity of brain, heart and liver influencing all the conceptions of mind and body until about the fifteenth century, when probably the teaching and experiments of Willis (1621-1675 A.D.) first broke the spell, and nervous and mental functions became integrated in the nervous system. Hughlings Jackson (1834-1911 A.D.) may be said roughly to have completed the neurological conceptions initiated by Willis.

The many vicissitudes of materialism and spiritualism, the

† They knew nothing, however, of the psychology of the brain, and were much handicapped by a lack of knowledge of the morphology of the nervous system generally.

<sup>•</sup> It is beyond human ingenuity to sort out all the relative influences of the speculative sciences, philosophies, cosmologies and ontologies of the ancient Greek schools of learning in the evolution of the modern sciences, especially in regard to biology in its widest sense, under which may be included morphology, physiology, embryology and psychology. The analysis is much clearer in the case of abiological sciences, physics, astronomy and mathematics. In evaluating Greek science it must be remembered that when at its zenith it was not wholly speculative, but speculative in the sense of a structure raised upon insufficient observation, which again was due to the lack of the means and methods of conducting scientific investigations; and bearing this in mind it is remarkable how much of their learning and knowledge is valid to-day.

struggle between the somatic and the Stalhian conceptions, etc., though a fascinating subject, cannot be entered upon here; the latter, in a modified form, however, still have their protagonists.

In order to be better able to evaluate the different schools of psychology, it would be well to pause for a moment to consider the criteria by which we judge anybody of knowledge or experiences entitled to be regarded as a science.

That very clear thinker Hart as long ago as 1908, in a paper, "A Philosophy of Psychiatry," now a classic, which appeared in our pages, drew our attention to the radical change which had occurred in this all-important matter since the ascendency of phenomenal idealism in cosmology. "Science," he said, "is characterized, not by its contents, but by its method of investigation—it embraces the whole field of knowledge, and is as applicable to history as it is to chemistry."

Now Auguste Comte (1798–1857 A.D.) in 1834 formulated the "Law of the Three States," according to which every branch of knowledge passed through three stages: (1) Supernatural—events are regarded as the production of supernatural agencies; (2) metaphysical—abstractions are personified, and entities inseparable from phenomena are substituted for the supernatural agencies; essences are sought for, and the supposition that men's minds cannot transcend the phenomenal is contemptuously rejected; (3) positive or scientific—man applies himself to the observation of phenomena, investigates the conditions of their production, and formulates laws of their relation.

This third stage has since acquired greater definition. Science is a systematic arrangement of facts as recorded in the mind primarily by sense impressions. In other words, it deals with human experiences, not objects, the method of so doing being allimportant. Carl Pearson's three steps are now commonly recognized, namely, those of (1) observation of phenomena, (2) ordered classification of the facts observed, and (3) correlation of the facts thus grouped and the arrival at conceptions which are termed scientific laws. By means of these laws, if valid, we are enabled to foretell and control phenomena of the same nature in the future. But before scientific laws become valid each stage is subjected to the severest criticism. The conceptions must, as far as possible, be impersonal, and the laws must have the approval of the large body of minds capable of appreciating the terms in which they are rendered. This, however, is not all. Experience has taught us that the proper use of speculation and hypothesis plays an important part in the progress of science, and that inductive methods per se cannot take us very far.

Huxley (1825-1895 A.D.) says:

"All science starts with hypotheses—in other words, with assumptions that are unproved, while they may be, and often are, erroneous; but which are better than nothing to the seeker after order in the maze of phenomena. And the historical

<sup>\*</sup> Journal of Mental Science, vol. liv, 1908, p. 476.

progress of every science depends on the criticism of hypotheses—on the gradual stripping off, that is, of their untrue or superfluous parts—until there remains only that exact verbal expression of as much as we know of the facts, and no more, which constitutes a perfect scientific theory" (Hume, by Prof. Huxley, 1878).

We are also minded of the saying of Horace Walpole, "In all sciences the errors precede the truths; and it is better they should go first than last."

We have seen it stated somewhere, but not recently, that by psychology is commonly meant an empirical study, scientific, or at any rate on the way to become scientific, in method, of actual mental activities and states, and the question arises, Has psychology now achieved the status of a true science or is it still on the way? It has been objected that psychology can never attain such a status, since it deals with abstractions—ideas, feelings, etc.—which cannot be verified, and that all mental processes and even the existence of the mind are mere hypotheses.\* Such objections, however, can no longer hold good, for it is held that science in the modern sense deals primarily with mental conceptions or experiences and not merely with matter.

Until latterly it could only be affirmed that psychology had taken the second of Pearson's steps, which entitled it to be regarded as a descriptive science. Broadly speaking it consisted of a mass of empirical and experimental observations of divers values, classified and systematized according to many plans, always answering the question "How?" to the satisfaction of the various schools of thought and methods of approach, but never offering any adequate reply to the question "Why?"

The reply to the question "Why" is all-important to psychology and psychiatry. Without it there can be no dynamic psychology

and no psycho-pathology.

As regards psychology, the reply to this question has been attempted chiefly by postulating ontological considerations commonly rejected from the sphere of science. Physiology, chemistry, physics offer causalities for life and behaviour, which, though they may be valid as such, when followed to their logical conclusions always lead to the negation of mind or offer psychological speculations, some of which out-rival those of the descendants of the neo-Platonists and the Arabian philosophers in this respect.

It was the formulation of the Darwinian hypothesis of organic evolution in 1859 the subsequent controversies which vitalized psychology, and led to it leaving its static stage as a scholastic and descriptive body of knowledge, and approaching nearer that of a true science equipped with well-authenticated laws and scientific methods, and becoming dynamic in practice as well as in spirit. Psychology up to this time had been of little practical help to psychiatry, as shown by the fact that treatment was largely physical and empirical, the so-called moral treatment, excellent in its way, being chiefly an exhibition of a revolt

<sup>•</sup> Comte would claim, for instance, that only the physiological conception of life and behaviour could be regarded as scientific. He totally rejected as unscientific all introspective observation, just as he was opposed to all à priori assumptions.

against repressive measures prevalent since the time of Celsus (25 B.C.-45 A.D.), who included them in his treatment, otherwise humane, the former being remembered and the latter forgotten by succeeding generations until the era of Pinel, Tuke, and Fox. The most virile off-shoot of psychology, the experimental psychology of Flechner (1834) and Wundt (1862), remained aloof from the external world of affairs, and continued to pile up data upon data and theorize thereon. It has now found a place there, side by side with clinical and dynamic psychology, as industrial and educational psychology, and has been co-opted to the science of psychiatry.

We cannot now deal with the influences on psychology of the rise of modern comparative (paleo-) psychology, of genetic psychology and of the immense vista opened up by the doctrine of organic evolution, especially as hormicly conceived,\* but it may be said that dynamic conceptions saved descriptive psychology from the oblivion to which it seemed doomed.

Of the attempts which followed to answer the question "Why" in the problem of life and behaviour, two must be singled out as predominant, both based upon biological conceptions, one on mental phylogeny, the other on mental ontogeny. In the one case the vital impulse or urge was shackled to "purpose" as hormicly conceived, and identified with "instinct," and in the other case, to "wish" in the Freudian sense and identified with "libido" and "Ego-trends."

By hormicly conceived it is meant that a teleological factor enters into the causality implied; the end in view of both "purpose" and "wish" is not that of the observer, but of the observed, and it determines and adapts the behaviour all along the line until the goal is reached. It is not merely a blind striving of the vital impulse under the tutelage of a Supreme Power or the force of circumstances (evolution). This hypothesis of life and behaviour is now commonly called the "hormic theory of action." It is not incompatible with the "doctrine of descent," which deals with that which is evolved. The two combined deal with "life or mind as the 'élan' or urge of which the evolved is merely the phenomenal expression."†

It is held by some that teleology in any sense cannot enter into a scientific causality. This may be true of the mechanistic sciences. Purpose is something experienced and is therefore a psychological conception, and if the phenomenon which follows has a time

<sup>•</sup> Lloyd Morgan says: "For Darwin evolution meant a de facto 'doctrine of descent' with emphasis on natural selection. A hormic explanation was, as I judge, quite foreign to his thoughts. For Lamarck, on the other hand, what we call evolution meant a doctrine of descent subject always to hormic explanation. His stress is on the need to be satisfied through endeavour, which is the parent of habit. Inheritance of structure begotten of habit is contributory but incidental. That which is essential is transmission of the stored memories which habits imply. And such transmission of memories is hormic to the core." And in another place: "Hence the status of memory is one of the main issues on which hormists and non-hormists are in radical opposition."

<sup>†</sup> The hormist holds that evolution is no longer the antithesis of teleology but its method.

relationship with it and is constant, it cannot be denied validity in causality in a scientific sense. There are no grounds for rejecting purpose as unscientific in relation to the behaviour of organisms like man, which can look backwards and forwards and are capable of understanding. But it is in the lower forms of life that difficulty arises, as we have already pointed out, for it would appear then impossible to some to exclude à priori and metaphysical considerations if purpose is understood in the hormic sense; but it may exclude psychology—indeed all the biological sciences—from the category of mechanical sciences. Lloyd Morgan would appear to go as far as we can without hormic implication when he says:

"We must, I think, if we are to relegate philosophical discussion to a suspense account, take physical influence, on the one hand, and mental reference on the other hand, as given in the constitution of the enminded organism. We may use the word 'perception' (as Leibniz did) in a very broad sense for the simplest form of reference. On this understanding—for 'perception' may be defined as a much higher mental process where there is the added factor of 'meaning'—on this understanding there is no call to deny that even the plant perceives the light-influence or the gravitative influence to which it responds. More generally we may say that to any mode of influence there may be a correlative mode of reference, however simple and primitive. From the nature of the case, since we cannot be an amæba or an acorn, we may be unable to adduce evidence that this is so; but we should leave open the hypothesis, extravagant as it may at first sight seem, that it may be so. Thus we go as far as we can with psycho-biology freed from all hormic implications" (Evolution in the Light of Modern Knowledge, 1925, p. 130).

We have already dealt with Prof. McDougall's definition of instinct. The following extract from his Social Psychology (quoted by him) states how instincts operate in man:

"The instincts are the prime movers of all human activity; by the conative or impulsive force of some instinct, every train of thought, however cold and passionless it may seem, is borne along towards its end, and every bodily activity is initiated and sustained. The instinctive impulses determine the ends of all activities and supply the driving power by which all mental activities are sustained; and all the complex intellectual apparatus of the most highly developed mind is but the instrument by which these impulses seek their satisfactions, while pleasure and pain do but serve to guide them in their choice of the means. Take away these instinctive dispositions, with their powerful impulses, and the organism would become incapable of activity of any kind; it would lie inert and motionless, like a wonderful clockwork whose mainspring had been removed, or a steamengine whose fires had been drawn. These impulses are the mental forces that maintain and shape all the life of individuals and societies, and in them we are confronted with the central mystery of life and mind and will."

## C. v. Monakow, another hormist, says:

"The emotions (the primitive instincts of the living protoplasm) are therefore the primary factors; they really create and perfect the nerve substances, construct the brain, and the brain inclusive of the emotional sphere which, by reactive influence, is constantly creating new emotions, becomes the instrument for all our emotions, sensations and thought" (The Emotions, Morality and the Brain.)

There are several other aspects of this interesting problem which we cannot take up here, but the general proposition is that psychology, by finding a dynamic approach, has definitely entered upon its final stage as a true science, and that the position thus gained will, in course of time, be consolidated by an abundance of good works in this way and in that way as the field of human behaviour is further invaded, evidence of which it is not difficult to find.

It would be well now to continue Prof. McDougall's dissertation on the development of modern psychology, supplementing it with any additional facts as it may appear necessary to its better understanding.

He very justly remarks that the school which seeks to explain all human experience and activity in terms of physiology has constantly gained ground during the early modern period of psychology. Locke and Hume are to be regarded as the founders of association psychology—a type of idea psychology—and Hartley, the two Mills and Bain as the leading exponents. According to this school, all experience may be regarded as a succession of "ideas" linked or associated together which draw one another into consciousness by means of their links or automatic couplings. The advances made as regards the histology of the brain, and the more the latter was studied, led Hartley (1705-57 A.D.) to devise the plan of attributing to the brain "the couplings and all the pulling and pushing, in short, the whole business of shunting and sifting ideas into and out of consciousness." Further revelations by the physiologists of the structure of the brain gave rise to the notion of each idea being resident in some one cell, and came into consciousness when the cell was roused into activity by a nervous current. According to the law of neural habits a series of cells became involved as a functional unit, and in this way all experience was thought to have a physiological explanation. Sensationism took a step further and dissected ideas into sensory elements, and assigned each sensory element to a nerve-cell. A cluster of cells became a functional unit, i.e., an

Prof. McDougall goes on to tell in a few words how the conception of the "idea" of the moment as the active thinker passed out of fashion, together with the necessity of a mind, soul, self, an experiencer; and consciousness was reduced to a passive spectator, and finally to that of a "super."

The theory of mind of Hartley, referred to by Prof. McDougall, may be summarized as vibrations from the exterior occasioning ideas in the brain through the sense-organs. The homogeneity of ideas, sensations and physical vibrations was assumed, but the vibrations stopped short at sensations. Afterwards there occurred "associations."

Hartley's mechanistic attitude is best illustrated by a quotation, dealing with volition, from his Theory of the Human Mind:

"The will is, therefore, that desire or aversion which is strongest for the present time. Since, therefore, all love and hatred, all desire and aversion, are factitious and generated by association, i.e., mechanically, it follows that the will is mechanical also."

Of the Scottish metaphysicians, Thomas Brown (1778-1820 A.D.) alone united himself with Hume and Hartley.

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Gall (1758-1828 A.D.) founded the cult of phrenology, which tried to combine "brain-physiology" with faculty psychology. Though it was short-lived, it was a precursor of localization of cerebral function as we know it to-day. His most valuable work, however, lay in directing attention to the prime importance of the cerebral cortex in psychic phenomena.

Swedenborg (1688-1772 A.D.) found an abode for the psyche in the

cells of the brain.

Thus mechanistic notions came first to be definitely recognized in psychology, but they were soon to be strongly emphasized by the introduction of the mechanical reflex theory of mind, which finds its extreme expression in those soulless psychologies apparently popular in America of which Watsonian "behaviourism" is a prominent example.

Who can doubt or fail to admire the earnestness and devotion of those seventeenth, eighteenth and early nineteenth century savants, who, like those of old who sought the philosopher's stone, felt the lure of this stupendous mystery of the nature of the soul and of its earthly residence. Though they failed, like many before them, can

we say we have succeeded?

The spirit of those times is well exampled in the following words of Sir Busick Harwood (1745–1814 A.D.), Professor of Anatomy at Cambridge University in 1785, which for literary elegance have been seldom surpassed:

"When we dissect the brain and observe the different substances of which it is composed, and their different forms, imagination, assuming the office of reason, would willingly assign a peculiar use to every part; and pronounce one to be the residence or rather the instrument of memory, another of abstraction, a third of volition. When a sensation is excited by the action of any substance upon the body we immediately perceive upon what part of the body the substance acts, where the impression begins; and as the impression is conveyed by the nerves to the brain, it is conceivable that we might have been so constituted as to perceive with the same facility in what part of the brain the impression ends. This, however, experience teaches us, we are not able to determine. The skill of the anatomist has demonstrated every process, explored every cavity, and would, if possible, have traced every filament of this inexplicable mass of that wonderful and anomalous organ, placed on the doubtful confines of the material and spiritual worlds. Nor have the physiologist and meta-physician been less eager to discover or to assign to each part its peculiar office. Whatever may be due to the former for accuracy, and to the latter for ingenuity and zeal, we must lament that little knowledge has resulted from their labour. At this advanced period of science, when almost every other subject has been illuminated by the experiments, the deductions, and even by the conjectures of the learned, we are not able to proceed a single step beyond the fathers of medicine, who in the very infancy of our art pronounced this inscrutable mass of organized matter to be the fountain and the reservoir, and the beginning and the end of the whole nervous system, where every idea originates, and to which every sensation is referred."

In subsequent sections of his introductory chapter Prof. McDougall describes the arrival on the psychological stage of the mechanical reflex theory of mind—a development by physiologists of the principle of reflex action first surmised by Descartes (1596–1650 A.D.), and afterwards outlines it with a lucidity which ever distinguishes our author's writings. He then proceeds to demonstrate its

inadequacy and its unsoundness as a foundation upon which to erect a psychology.

In this historical retrospect, which forms the greater part of his introductory chapter, he has of necessity to condense both his data and arguments, especially the former. As William James says somewhere, "Abridgments of other men's opinions are very unsatisfactory; they always work injustice." We cannot therefore complain of the relatively few names mentioned, and the almost complete absence of direct references, nor can we blame the author, who has written this book with a very definite and distinct motive, taking legitimate opportunity of using or applying historical data to further his purpose, nor is it other than natural for him to give way to the inclination to clear the board as far as possible of other competitors, to be better able to exhibit his own wares.

From the point of view of history per se such treatment is, however, a misfortune, and the student is apt to arrive at one-sided notions of men's work and character.

From McDougall's synopsis of the growth of psychology, although cleverly written, the student gathers no adequate idea of the splendid services to humanity rendered by these psychologists, physiologists and philosophers, and their contributions to the onward march of the human intellect after its temporary suspension during the Dark Ages.

It must be remembered that for several centuries the minds of many generations had yielded a passive obedience to Aristotelean teachings in all regions of knowledge, the mighty Stagirite being absolute monarch in all centres of learning supported by an all-powerful Church. As to the followers of Plato, they inhabited a region beyond the aspirations of ordinary men—religion and transcendentalism. The nett result was stagnation; and speculative philosophy could make no further progress. The syllogistic method of reasoning had become a mere method of argument and disputation, and not of the acquisition of knowledge. What these men did was to carry on the work of Bacon and others in emancipating the human mind from the bonds of scholasticism and religious bigotry.

This has been admirably put, but in another relation, by an unknown author, when he says:

"The human mind was set free to think its way to truth, and to explore every avenue which promised a way to reality. Not only was the earth to be searched, and Nature's laws to be fearlessly examined, but as fearlessly the documents of religion were to be searched and examined for the truth hidden there in the midst of legend, superstition and ignorance. The whole round of life was made free to inquiry. Humanity advanced in knowledge, in power, and in wealth, inclining now to materialism and now to idealism, but always cherishing in its mind the idea of a road to be traversed and a goal to be reached."

From our author's historical remarks, all that the student gathers regarding these great men is that their efforts to advance psychology were mostly vain because it did not occur to them to take a biological view as hormicly conceived. This may or may not be

true, but what they did do was to break with tradition and initiate those trains of events which ultimately led to the revitalizing of psychology freed from pure speculation and superstition.

However, these unfortunate impressions are in some degree corrected in the preface, the reading of which should not be omitted, in which the author also takes the opportunity of freely acknowledging his indebtedness to the works of James Ward, F. H. Bradley,

Dawes Hicks and G. F. Stout, especially the last named.

Prof. McDougall will find many to agree with him in his endeavour to purge psychology of the influence of mosaic tradition, and also with his attitude to the crude materialistic application of reflex action or materialism in any absolutist form as applied to the workings of the mind. He is also convincing as to psychological hedonism not being a final cause.

Let us see exactly what our author means by the "mechanical

reflex theory of mind."

"Thus all human action is made to appear to be of the type of reflex action, to be the issue merely of the play of nervous currents, starting in the sense-organs by stimulations from the physical world and propagating themselves through the jungle of the nervous system, finding always the paths of least resistance according to purely physical principles. All human action is reflex action, or, as the principle is more commonly formulated, every human action is a mechanical response to a stimulus" (p. 23).

It is very obvious that what Prof. McDougall holds up for condemnation is a reflex theory of mind formulated by men impatient with the unproductiveness of descriptive psychology who have thought to improve matters by refurbishing a decayed materialistic doctrine of mind and matter, and who have intruded the domain of psychology and physiology, picking and choosing such facts as best suited their purpose and ignoring the rest. It may be, however, that they are so constituted as to be unable to attain to a more than limited insight into either or both sciences, and are thus led to confuse general impressions with actual facts. It is also only a too common practice for masters of a particular body of knowledge to encroach on the domains of another, and give expression to utterances of very definite nature regarding the region so invaded, which the true master in it would only venture with the greatest hesitation to state as the rarest possibility or even deny.

We have therefore some difficulty in tracing the genealogical tree of this modern doctrine of mind to any responsible body of philosophers, psychologists or physiologists. Although Locke, as a recent writer puts it, "hatched far more than his own chickens," as exemplified by the theories of Berkeley, Hume, Leibnitz, Kant and Voltaire, who all found their inspiration in his famous essay, he cannot, by the wildest stretch of imagination, be held responsible for hatching such an addled-headed offspring as a psychology which

<sup>\*</sup> Hobbes (1588-1678 A.D.), a friend of Bacon (1561-1626 A.D.), impressed with his inductive method, led the way as regards England and Scotland, and was followed by a succession of brilliant thinkers like Locke (1632-1704 A.D.), Berkeley (1685-1753 A.D.), Hume (1711-1776 A.D.), Mill (1774-1836 A.D.), Hamilton (1788-1856 A.D.); and Herbant (1776-1841 A.D.) did a similar service for Germany

ignores the inner mind, and resolves itself into a physiology which speculates on another subject about which it is not competent to speak.

The physiological phenomena of life only can be explained by physiology, its psychic phenomena by psychology, its chemical phenomena by chemistry, etc. Life has many sides, and the mental side is only one of them; the only advantage accruing to psychology and from which it acquires a certain dominance is that outside, as it were, its own particular province; it alone can speak for the organism when acting as a whole in response to environment. Some would have it that the day will come when life, soul, mind, behaviour, etc., will be reduced to a chemical equation. Of course this is nonsense, for chemistry is a secondary science based upon the deeper truths of physics and mathematics and only an expedient method of dealing with them. Beyond these truths men's minds cannot proceed far because the finite cannot conceive of the Infinite, and the belief in any ontology is an act of faith which may be justified or not. It is much more likely that a more synthesized biological science will be evolved, allowing of the mind to take in at one time a much wider view of life than it can at present. It is such a science that psychiatry and sociology (including education, industrial efficiency and mental hygiene) needs, though at the present moment they are beginning to find modern dynamic psychology above all sciences the most helpful.

It might, with advantage to the student, have been explained that the reflex principle as applied to psychology does not always take the irrational garb of the "behaviourist." Mention might have been made that this principle is accepted by a large body of psychologists and neurologists as a basis, not necessarily the sole basis, of a theory of mind which does not exclude a consciousness, a soul, a self, but recognizes that the mind for the most part functions subconsciously, unconsciously or automatically, tailing off into functions which are purely nervous and physiological.\*

 In these days it goes without saying that mind is bound up with the working of the nervous system, and as far as we can perceive its functioning is dependent upon the activity of the cerebral cortex and to a less extent the basal ganglia. It would perhaps be more correct to say that mental functions depend upon the brain and basal ganglia retaining their connection with the rest of the nervous system. Even if Huxley was right when he said, "What we call the operations of the mind are functions of the brain, and the materials of consciousness are products of cerebral activity," and which was also put so misleadingly by Cabanis and Vogt, it is not inconsistent with constructive idealism. The mind thus bred out of matter is only cognizant of experiences upon which it constructs or substitutes a hypothetical reality. It may be, then, that matter through the mind never knows itself, or on the other hand (Huxley), the brain (mind) is the machinery by which the material universe becomes conscious of itself. It is remarkable how educated men and women generally, though never backward at expressing admiration, even worship, for the works of Nature, make an exception in the case of the brain. This despised yet wonderful machine has been clamouring for recognition ever since the dawn of history and has yet to come into its own. For the most part it is only grudgingly given a position secondary to a hypothetical and immaterial entity called the mind, and not that if it can be argued otherwise. Yet its existence is the most stupendous fact of history, for without it there would be no history, no world, no universe, no Nature for mankind.

For these functions many find it necessary to apply a hypothesis of "reflex activity," not merely reflex "action."\*

The philosophic conception implied in the use of the term "activity," it should be noticed, is not solely that of "action." "Activity" implies an "efficient" cause; conation, as Prof. James Ward rightly insists, is an example of an "activity"; by

action we mean simply "action in progress."

Marshall Hall (1790–1857 A.D.) described in 1833 (*Philos. Trans.*) what is now known as "reflex action" as "reflex function." He maintained that it was the "function" of the ganglionic centres below the level of the corpora quadrigemina to regulate adaptive acts independently of consciousness, sensation or any psychic powers. Speaking broadly, consciousness, sensation and ideas were held by some or other of the schools of psychology to be actual dynamic factors, and Marshall Hall associated their activity with those parts of the brain higher than the corpora quadrigemina.

We are unable to trace when reflex "action" became confused with reflex "function" or reflex "activity," but there seems no need for it to continue, and the applicability of the term "reflex action" should be limited to those responses to stimuli, and which are of an organized and physiological character. They are no doubt all adapted to some useful purpose, and in some instances can be inhibited, but the response cannot be otherwise varied by the mental activity.

There is an enormous difference between the psychic reflexes associated with the neopallium and those organized reflexes of the archipallium and still lower ganglia, but none in principle, the former being capable of infinite variation and possibilities of reactions to the same or similar stimuli, and there are many gradations between them.

Furthermore, in the case of the psychic reflex, between the stimulus and response there may or may not intervene conscious deliberation associated with and guiding inhibition. This implies initiative and selectivity. When consciousness interference is slight or absent, there occurs what is known as unconscious or automatic

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The phenomena of automatic or involuntary response had been observed and studied by Montaigne (1533-1592 A.D.) and Descartes (1596-1650 A.D.), and Astruc (1684-1766 A.D.) in 1743 who was the first to use the term "reflex" in this connection. The idea was further developed by Unzer and Prochaska (1784), the latter originating the well-known reflex experiment of the decapitated frog, and designated the response "impressionum sensoriarium in molorias reflexio.

Other observers in the train of its development are Legallois, Lallemand, Cameil and J. Müller abroad, and at home Robert Whyth (1714–1766 A.D.), who was a connecting link (with Unzer in Germany) between Stahlism and psychic reflex function. Marshall Hall's entry on the stage we have described. It was Laycock who, in 1840, extended the theory of the reflex function, which Marshall Hall had limited to regions below the corpora quadrigemina, to those above, and formulated the doctrine of the reflex function of the brain.

He postulated that consciousness, per se, was not a cause but a coincidence—although as to evolutional life an essential one; and, as such, the manifestation of an "immanent" energy, the cause of both life and consciousness. Under consciousness were included sensations, ideation and volition, and, like the sensations coincident to spinal reflexes, they were due to cerebral conditions or functions excited reflexly. The actions occurred, to use the words of Prochaska, "Mens conscia vel inscia." Laycock was hormic to the core. Life was a teleological force not distinct from the mechanism -an ordinary force, by which man is enabled to make his brain mechanism subservient to the attainment of known foreseen, and therefore purposed ends. Unconscious mind was the more intelligent, and nowhere could it be said that "here ends instinct, here begins reason." The conscious mental processes and strength of will depended upon the vigour and nutrition of the cerebral cortex and its degree of organization.

The theory of "unconscious cerebration" of Carpenter (1813–1885 A.D.) is perhaps better known (1851), and though based upon

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the reflex response, was fundamentally different philosophically. It was the Cartesian doctrine stated a little differently. Descartes located his "thinking" substance in the pineal gland, and Carpenter his "will" and "self-determining power," which regulates the automatic mechanism, in a "sensori-motor" system of his own creating.

Laycock was a remarkable man, and his teachings exerted an influence far beyond that of his own country. His ideas were much in advance of the times. He even stated that it was probable that the increasing stratification of the cells in the cortex was associated with greater knowledge and wider mental powers, etc., thus foreshadowing the work of Campbell and Bolton.

These hormic conceptions of mind and matter are traceable back to the old animism shorn of most of its superstitious implications, and were realistic, but not mechanical in the strict meaning of the word. There was also a reversion to the Aristotelean con-

ceptions of life and mind.

Descartes in reality reduced the living basis of mind to a mechanism pure and simple. He regarded both his substances—thought (soul) and extension (body)—as in themselves inert like wax, and dependent directly upon the intervention of the Deity for their activity. Thought was limited to man. Animal life was automatic. Man had also "vital" or "animal" spirits, and Descartes, in his anthropology, speaks of a definite interaction between soul and body through the pineal gland, and he can thus be claimed as an interactionist as well as a psychological dualist.

Theories of reflex activity as applied to the mind are thus not necessarily soulless and mechanistic, and modern "behaviourism" must not be taken as a representative view in this connection.

Since Laycock's time more definite knowledge both in regard to physiology and psychology has occasioned many variations from the hypothesis he developed, but fundamentally there has been but little change, and it is now widely taught in some form or other, and it does not appear to us to be inconsistent with the main argument of Prof. McDougall's teaching.

Maudsley, in 1859, recognized the importance of this view of the

life and mind in the following words:

"Every organism is, in fact, an intelligent response to external forces. Unconscious, indeed, this intelligent power, which with such wonderful uniformity elaborates material and with such unerring precision applies the different varieties to their different purposes, so that even the scar on the child's finger is not forgotten, but appropriately nourished, grows as the body grows, and which in the unfailing constancy of its action, often brings recollection to the forgetful, conscious soul.

<sup>&</sup>quot;Those who describe organic growth and development as the results of 'vital force' operating according to certain laws, can feel no scruple in admitting its probable correlation with the other natural forces by which its agency is so much modified; but when we substitute for vital force the unconscious intelligent soul, a difficulty will arise in the minds of many, in admitting that correlation, which the analogy of nature renders probable. But are the two doctrines really incompatible? To suppose that they are not is startling, for it is to suppose that mind is one of the correlated forces of nature. And yet there are many weighty arguments in favour of regarding the constructive force as unconscious soul.

<sup>&</sup>quot;Conscious soul may forget; unconscious soul does not. It is true that all

its operations are performed quietly, without other notification than the result; but if some disturbing agent interfere with its peaceful action, it is admirable to observe how speedily a consciousness thereof is exhibited, and what intelligence is manifested in the means adopted to remove the impediment." (Journ. of Ment. Sci., vol. vi, 1859, pp. 65-66.)

All we have written on this subject of course is as well, even better, known to Prof. McDougall than to ourselves, but it may not be to the readers of this book, and we trust it will enable the latter to see "behaviourism" in its true prospective, as a mushroom growth poorly-rooted, of fragile structure, and containing little of nutritive value.

The attitude Prof. McDougall advises psychological students to take up in regard to physiology is thoroughly sound. He says:

"Let the psychologist make the fullest possible use of all the help that physiology can give: let him regard it as one of his tasks to harmonize or co-ordinate the facts and descriptions of his own science with those of physiology. But let him not capitulate to the unjustifiable demand that his science shall abdicate its functions in favour of mechanistic psychology" (p. 36).

"Let us push explanation in terms of nervous structure and function as far as we can; but in doing so, let us not suppose that such explanations are ultimately

and completely true" (p. 37).

"Physiology, as it exists to-day, aims to give us better understanding and control of the chemical and physical processes of the body, and psychology . . . aims to give us a better understanding and control of the behaviour of the organism as a whole" (p. 38).

From the above quotations it will be obvious that Prof. McDougall has no sympathy with those who would treat physiology and psychology as entirely separate subjects, and formulate a psychology without any reference to the physical correlates of mind.

Having declined to follow the modern practice of substituting "brain" for "mind" he recognizes that psychologists must postulate a "something," and for want of a better word, and until the brain can substantiate its claims to be regarded as this "something," he thinks it better to fall back on the old-fashioned word "mind."

As we have already noted, Prof. McDougall advises the student to leave the question of dualism of mind and matter to metaphysics, with which science is not immediately concerned.

He claims that his psychology is "empirical" in that it "relies upon the observation of concrete facts and the induction of general rules or laws from these concrete particulars rather than upon deductions from any *d priori* principles." The latter are apparently not excluded, so he confirms what many of us feel—that a hard and rigid psychology, and one that is not protean both as regards the ground it covers and the methods it employs, is likely to fail in its practical applications and lose those dynamic qualities which go to make it a living science in the service of humanity.

We regret we are unable to deal with those chapters devoted to the more general and descriptive aspects of psychology. It is obvious that our author, having started out with what might be called a "soul"—a something which knows—has no use for that building up of ideas from the primary sensations by a process of active association so commonly taught. He takes the common-sense view that the growth of mental structure is first by discrimination, apperceptive synthesis and then by association.

Attention is conation and not the outcome of affection, and the

emotions are correlated with his categorized instincts, etc.

Throughout his book he keeps to his text, which is—"Man is essentially a purposive being, and that any psychology based on the assumption that he is merely a mechanical structure is unprofitable and misleading."

We feel that nothing but good can come from the close study of Prof. McDougall's "Outlines," which we hope will be read widely. What strikes us particularly about this book is that it is at once a scholarly and human production, and especially the latter, and this we have tried to bring out in our review.

We are looking forward with particular interest to the companion volume, which will deal with the abnormal processes of mind from the standpoint of the student rather than from that of the physician.

We trust that the lengthy fashion in which we have dealt with Prof. McDougall's proposition will assist readers of his book (and we hope there are many) to more effectively apprize its value, which, after all, is a matter for their judgment and not ours.

It is not the business of a reviewer to dogmatize, but to be helpful by criticism and comparisons with contemporary opinions, so that the reader is put in possession of as many sides of the question as possible, especially those touched lightly upon or neglected entirely in the work under review.

J. R. Lord.

Trattato di Psichiatria. By Leonardo Bianchi, Emeritus Professor of Nervous and Mental Diseases in the Royal University of Naples. Naples: Casa Vittorio Idelson, 1924. Third edition. Medium 8vo. Pp. xii + 811. 112 Illustrations. Price L.85.00.

This is the third Italian edition of Senator Bianchi's well-known text-book, the first edition of which was translated into English by Dr. MacDonald in 1906.

Whilst the general scheme of the book is but little changed, considerable alterations have been made in the text. At the outset, 42 pages are devoted to a brief exposition of the more important facts regarding the anatomy, histology and physiology of the cerebral cortex and the underlying white matter. Pages 43-222 serve as a compendium of physiological psychology. In seven chapters devoted to the Physio-pathology of Perception, Attention, Memory, Ideation and Language, Emotion and Sentiment, Volition, and Consciousness, the medical student has a very

serviceable and practical text-book of normal and morbid psychology. It is much more suited to his needs and much more in harmony with his biological training than the majority of so-called text-books of psychology.

The second part of the volume, dealing with clinical psychiatry, consists of 34 chapters, embracing pages 223-796. The author. in this edition, has not adopted a particular classification: recognizing that it is impossible to establish one which will meet all requirements, he has preferred to deal with the various psychoses in a logical order which, in point of fact, follows pretty much the order of his former classification: (1) Phrenasthenia, (2) paraphrenia, (3) delinquency, (4) the epilepsies, (5) hysteria and hysterical insanity, (6) paranoia, (7) fixed ideas and obsessions, (8) neurasthenia, (9) sexual inversions and perversions, (10) mania, (11) pure melancholia, (12) maniacal depressive insanity, (13) sensory insanity, (14) mental confusion, (15) acute paranoia, (16) choreic insanity, (17) luetic insanity, (18) acute delirium, (19) pellagrous insanity, (20) alcoholic insanity, (21) morphinism and morphinic insanity, (22) cocainism and cocainic insanity, (23) saturnine insanity, (24) dementia præcox, (25) secondary dementia, (26) paralytic dementia, (27) syphilitic dementia, (28) senile dementia, (29) post-apoplectic dementia, (30) aphasic dementia, (31) traumatic neuropathies and psycho-neuroses. To these there is added a chapter on expert evidence.

There is no need to dwell here upon the very great merits of this work—that has already been recognized by authorities everywhere. Bearing in mind, however, that almost twenty years have passed since the publication of the English translation of the first Italian edition, English readers will probably be interested to know what are Bianchi's views on some of the questions that have been much disputed in more recent years, more especially with regard to mania-melancholia, dementia præcox and psycho-analysis.

Manic-depressive insanity.—Bianchi contends now, as in former editions of his work, that there exist pure forms of mania and of melancholia, as well as forms with the two-fold aspect-maniamelancholia. In his opinion pure melancholia is not confined to the pre-senile or involutionary form recognized by Kraepelin. contends that it may be met with even in the third decennary of life, with features such as anxiety and anguish, which, according to Kraepelin, are characteristic accompaniments of the involutionary The author remarks that it is but natural that at the age of fifty the clinical picture should be coloured by ideas of an anxious kind, by fears and heart-rending doubts which represent historical mental facts, accumulated during the elderly patient's lifetime, facts which form but a small part of the mental capital of the young patient, with less experience of the vicissitudes of life. "Is the diversity of the mental content and disposition of mind in the later age," he asks, "to be regarded as affording a differential basis on which to found distinctions of clinical forms and pathological entities?" Decennial reviews and observation of his cases have not induced Bianchi to think so.

The author does not accept the views of Kraepelin as to dementia præcox, and all that is to be included in that denomination. of the syndromes, regarded by Kraepelin and other authors as varieties of dementia præcox, find a place in Bianchi's group of "sensory insanity," or sensory psychosis. This embraces "all those psychoses which commence with hallucinations and illusions, that is to say, with symptoms due to a lesion, of one kind or another, of the sensory areas of the cerebral cortex." These sensory disturbances may dominate the clinical picture throughout the whole course of the malady, or they may disappear from the scene shortly after initiation of the disease. To Bianchi, the physio-pathology of the sensory field has a very important bearing upon morbid psychology, especially as regards the significance to be attributed to the symptom "hallucination" in the various psycho-pathological syndromes. He argues that, although a hallucinated state is common to many mental affections, it is necessary, in each case, to define the proper significance of the hallucinatory phenomenon, and to decide whether, on the one hand, it is merely a concomitant factor, or, on the other hand, the outstanding primary and fundamental factor from which all the other symptoms of the syndrome have arisen. Granted that the posterior zone of Flechsig is a perceptive zone and comprises a good part of the anatomical field of hallucinations, and admitting the functional relation subsisting between the anterior cerebral field and the perceptive areas, the presence of a hallucination raises the question whether the primary lesion has its seat in the frontal lobes, or in the sensory areas. the former case, dissociation of personality would be a primary phenomenon of the affection; the hallucinations would be secondary, to be explained by the fact that the frontal lobes had ceased to exercise their regulating and inhibitory influence over the activity of the sensory zones, which latter would, consequently, give abnormal, non-serviceable products. On the other hand, a primary lesion having its seat in, and involving super-excitation of, the sensory centres, would be accompanied by hallucinations which would have a profoundly disturbing influence upon, and overthrow the regulating influence of the higher regulating centres. This, Bianchi maintains, is what occurs in a large number of affections which he designates "sensory psychoses." It cannot be denied, he admits, that the same cause, let it be said the same toxins, which disturb the nutrition and function of the sensory areas, may exert a very harmful influence upon the great associative and regulating centres; but the fact remains that, in hallucinatory or "sensory" insanity, the malady begins, suddenly, with a hallucinatory explosion. Other symptoms may come upon the scene, but these will be found to follow closely upon, and to alter with, the frequency and vividness of the hallucinations. The malady may assume varying aspects, one or other of which may happen to be more obtrusive, at the moment of examination, than the initial phase. Whilst, in a few cases, the hallucinated sufferers preserve their personality fairly well, others—and they form the majority—become more or less confused, incoherent, demented, catatonic or paranoid.

original hallucination may disappear, or be less in evidence, in the secondary states, or, if hallucinations still remain evident, their true significance may not be properly appreciated. Kinæsthetic, auditory and visual hallucinations have a strong, disrupting influence upon the personality, the degree of resistance of which varies greatly in different subjects. The fragments of the decomposed personality may remain isolated, or may become grouped together, giving rise to new compounds which will manifest themselves variously—dissociated complexes, paranoid forms, catatonic symptoms—according to the mental make-up, and the structure of the "unconscious," of the individual concerned.

Amentia with stupor, mental confusion, catalonia and paranoid syndromes may all result from an acute hallucinosis and, with disappearance of the hallucinations, recovery ensues in a good percentage of cases. Multiple hallucinations give rise to dream-like states; waxen flexibility of the muscles, which we often meet with in the stuporose phase, resembles the waxen flexibility of the somnambulistic phase of hypnotism, in which, admittedly, the sensory sphere is exalted, whilst the higher consciousness is suppressed. Similarly, paranoid formations may find their explanation in the content of certain prevailing hallucinations, closely connected with the particular affective orientation of the patient concerned. These syndromes belonging to the acute, curable phase of the affection are not to be confused with true dementia præcox. When recovery does not take place, it is then that we find ourselves confronted by clinical pictures indistinguishable from those of dementia præcox.

Sensory insanity may be divided into several groups. The first consists of those cases in which an illusory perception (it may be of the patient's own person, or of other individuals, or of the environment) gives rise to false judgment, and determines a melancholic, affective state; or, it may be, disintegrates the personality, besieging it, as it were, and taking it almost by surprise. In all these cases there is a neuropathic constitution. Recovery is the general rule.

A second sub-group includes hallucinated individuals, generally of good mental constitution, in whom the hallucinations, though neither intense nor terrifying, are repeated for a long time, without disturbing the mental organization of the patient. Here the personality is preserved, and the patient is conscious of the morbid nature of the hallucinations. Sometimes it is possible to speak of a paranoid orientation of mind, though one would not be justified in describing the patient as paranoic.

In the third sub-group the disease is initiated with acute, or subacute, hallucinatory phenomena ,which give rise to confusion, stupor, or stupidity, which, once established, forms the chief symptomatic complex of the whole affection. We get here the picture of "acute dementia," which includes acute sensory delirium (Schüle, Krafft-Ebing), the Verwirrtheit and Verworrenheit of the Germans (Ziehen, Fritsch, Whille, Konrad and others), besides the amentia of Meynert and Tanzi, the stupidity and mental confusion of the French (Dagonet, Chaslin), and a good number of cases of

Kraepelin's dementia præcox, as well as a fair number of cases of the so-called delirium of collapse, or Erschöpfungsirresein (Kraepelin).

The author goes on to say that whilst the synonymy of this disease has given rise to a good deal of confusion, that is to be explained by the great variety of forms which the malady assumes, and by the persistence, in the course of the disease, of certain symptoms which confer quite distinctive features on the various syndromes, which are apt to be mistaken for the disease as a whole. The difficulty of detecting the disease at its very commencement, its long duration and neglect to take into account the individual factor have helped to obscure the true position. If, as the result of intoxications which give rise to hallucinations, the personality, in one case, is not disturbed, whilst, in another, it becomes paranoic (transformed to a certain extent, but preserving a certain logical capacity in the delusional manifestations), and in another becomes decomposed and dissociated (confusion, amentia, acute dementia) and manifested in a great variety of forms, sometimes with psycho-motor agitation, at other times with stupor, or a melancholic or gay tone of mind (melancholic and maniacal forms), or, again, with alternations of agitation and depression (manicdepressive phases), or with catalepsy, or paranoid formations, etc., one need not regard all these various syndromes as different diseases. We have to deal with a single disease, commencing with hallucinations and illusions which have the power of decomposing the personality. Variations in the external manifestations are due to intrinsic differences and to variations in the intensity of the primary The pathology is the same.

These syndromes cannot reasonably be distinguished by the mental confusion or the acute dementia, nor can they be considered as distinct from one another, because one form often changes into another. They succeed and alternate with one another, in such a manner that the dement of this group is sometimes catatonic, sometimes paranoid, at other times simply confused. For the pathology and interpretation of these syndromes, the important fact is that the majority of cases are preceded by an acute, or subacute, hallucinatory period, or by single, initial hallucinations, which cause rapid, or gradual disintegration and dissociation of the psychic personality. Difference of opinion between various authors with regard to relations subsisting between amentia and hallucinations is due largely, in Bianchi's opinion, to the fact that the majority of patients do not come under observation until weeks or months after the initiation of the disease, when it often happens that the hallucinations have become less frequent and less marked, or instead, simple confusion or the more or less complete syndrome of dementia præcox predominates.

In any case, it has been admitted by the majority of writers that hallucinations form a part of the various syndromes concerned, only there exists a difference of opinion as to their significance, some regarding them as primary and essential, and others as secondary and non-essential features of the disease. The author

illustrates this chapter on sensory insanity with a number of interesting clinical records. Amongst these, it is not difficult to recognize forms of mental disorder which, by many, would be included in the group dementia præcox. The author, however, makes it clear that when sensory insanity persists, it assumes, in its chronic phases, features which render it indistinguishable from the various recognized forms of dementia præcox. Confronted by any particular case of sensory insanity, at a somewhat advanced stage of the disease, it is impossible to say whether the issue will be recovery, or whether it will be dementia præcox. acute period may last but a short time, to be followed perhaps by stupor, with more or less catatonia, and, finally, by recovery; or it may last for weeks or months, with a good deal of restlessness and psycho-motor agitation, before signs of improvement are evident. Confronted by a case of mental confusion, we have no means of judging whether it will end in recovery, or whether it will be continued into dementia præcox. The percentage of recoveries following these acute cases is greater, in Bianchi's opinion, than one might be led to believe from Kraepelin's descriptions of dementia præcox.

Dementia præcox.—In this edition of his work the author devotes a chapter to "Dementia Præcox," but, prepared as we have been by his views upon sensory insanity and all that is to be included within that term, we are not surprised to find that the field of dementia præcox is within narrower limits than usual:

"Alongside those forms of mental disorder which have an acute, sometimes sudden and obtrusive, hallucinatory initiation, and which, if they do not end in recovery, assume all the features of dementia præcox, one must place another important group of cases, in which the disorder commences in adolescence, or not long thereafter, insidiously and unobtrusively." This, in Bianchi's opinion, is the true dementia pracox. The author's description of the affection embraces all the symptomatology ascribed to the Kraepelinian simple and hebephrenic types. In the later stages paranoid and catatonic syndromes may supervene. Bianchi contends that a division of the affection into various sub-groups (Kraepelin) is unjustifiable, for the various syndromes described may be found to follow one another in one and the same patient. He does not accept Kraepelin's "paraphrenia" with its four sub-groups. Speaking of the catatonic syndrome, he points out that this symptomatic complex is not, by any means, characteristic of dementia præcox. It may be met with in hysteria, melancholia, epilepsy, and occasionally in senile dementia. It is the expression of a particular idiosyncrasy, and is grafted upon a condition of mental dissociation because of one factor or another. It is more common in females and young persons.

The paranoid syndrome may find its explanation in the original paranoid structure of mind of the patient concerned (adolescents who are exuberant, or inclined to dream, or full of queer fancies or strange fears, or silly pride), or else in the prevailing influence of hallucinations, with hostile, persecutory, mystic or grandiose

content. In the author's opinion there is no need to deal with the depressive or excited-depressive forms of dementia præcox in special sub-groups. They cannot be confounded with the manic-depressive psychosis. Whilst in the latter affection the intelligence remains well preserved for a long time, the phases of excitement or depression occurring in dementia præcox always display a decided degree of dementia in harmony with the progress of the disorder.

In this chapter on dementia præcox, Bianchi again discusses, at length, the relation of sensory disturbances to the affection. He declares that they are never entirely absent, even in true dementia præcox, which commences, not in an acute manner, with a hallucinatory explosion, as does sensory insanity, but slowly and insidiously. It is, no doubt, true that the hallucinations which are in evidence at any particular moment are often secondary rather than primary, but, he declares, the fact remains that even here, in true dementia præcox, the symptomatology of the disease is often strictly associated with the play of hallucinations, and presents oscillations which follow variations in the sensory disturbance. "I have watched youths," he says, "who, after a period of intellectual dullness, with impulsiveness, again became clear and calm, regaining contact with realities and again displaying affection towards the parents and members of the family, so that there was reason to hope that they had made a good recovery. Suddenly, strange conduct, with impulsiveness and, sometimes, aggressiveness, and evident loss of affection, once more became In these cases it is the return of hallucinations that pronounced. has determined the profound disturbance in the mental condition." Bianchi is convinced that the strange, extravagant behaviour and incoherence, the change of character which characterizes the commencement of dementia præcox in young persons who do not manifestly suffer from an acute, initial, hallucinatory phase, are frequently related to sensory disturbances which pass unob-The patients do not complain of them; they have to be sought for. They may take the form of vague voices, or words, of phrases which break in upon and surprise the consciousness. Sometimes they appear to have their locus in the body (verbal hallucinations), or they are tactile hallucinations, kinæsthetic disturbances which lead to alteration in the fundamental mechanism of the personality; or the patients have dreams, whose influence is prolonged into the waking state, inducing, in a pre-occupied mind, a great confusion between the real and the unreal. The disattention, the distractions, the absences, the impulses, the various illogical attitudes, the extravagances, the eccentricities, the fleeting and repeated paranoid manifestations, the more or less apparent alterations of character, the intellectual and affective dullness, the personal neglect, the insomnia, the solitary habits, the mannerisms, the stereotypies, the stupid smiles-all those symptoms, in short, that characterize dementia præcox, and give indication of disintegration of the personality, are, with few exceptions, closely bound up with the existence of sensory disturbance. It is for this

reason that Bianchi is inclined to regard the various syndromes which have been brought together under the term "dementia præcox" by Kraepelin and others as secondary or terminal phases of sensory insanity. The important clinical fact is that acute sensory disturbances frequently end in recovery. Where the condition becomes chronic and recovery does not ensue, the sensory psychosis, in its later stages, assumes the clinical features which are indistinguishable from those of true dementia præcox.

Psychasthenia (confused ideas and obsessions), neurasthenia and hysteria are fully discussed in three chapters, and a reviewer naturally turns to them to see what importance the author attaches to psycho-analytical theories and practice in their ætiology and

treatment.

It may at once be said that Bianchi is not a psycho-analyst. refuses to accept the Freudian doctrine. He objects particularly to the Freudian view of the important part played by the infantile Speaking of hysterical conditions, he declares that the Freudian view that the emotion and idea which have been relegated to the unconscious and isolated from the personality have always a sexual content is not well founded. He does not deny the importance of sexual influence in the genesis of hysteria, but he declares that it is not the infantile "libido," but the fully developed sexual instinct that is to be reckoned with. He declares that the sexual complex takes its place in the waking consciousness, and is often kept consciously in repression by that sum total of individual, family and social factors, which psychologists term "inhibition," and others may speak of as "virtue." After all, sexual elements, he declares, form only a small portion, perhaps the most negligible, of the unconscious, the components of which are furnished by all the processes determined by the play of natural forces upon the organism, by all the causes which stimulate the nervous system in course of evolution. To regard the unconscious as filled with tactile and sexual processes, summed up in the term "libido," so dear to Freud and his school, is wholly arbitrary. There are other conditions of mind which give rise to hysterical manifestations, in men and in women, where a sexual interpretation is quite uncalled for, and, indeed, impossible.

Speaking of psycho-analytical methods of treatment, the author declares that, after much consideration and long study of the Freudian doctrine, he is convinced, from his experience in private and hospital practice, that the psycho-analytical method is dangerous, because very often there is introduced into the mind of the patient thoughts which we imagine we have traced in their "unconscious." Not only so, there is always the dangerous possibility of disrupting the personality of the patient, for it may be said of psycho-analysis that it is, at bottom, only an attenuated form of hypnotism, which may alter, deform and transform the consciousness of the subject, and introduce unwittingly something which was not there before. Results are more convincing than words! Bianchi declares that in an extensive private, as well as hospital practice, he has had excellent results in the treatment of

those very conditions which psycho-analysts make their special field, without having had recourse to any method of treatment which could be described as psycho-analytical.

The Child, the Clinic and the Court: A Group of Papers. Republic Inc., New York, 1925. Price \$2.00.

This volume contains 14 contributions from workers connected with the Juvenile Courts in America, written to mark the twenty-fifth anniversary of the enactment of the Illinois Juvenile Court Law in 1899. The papers cover a wide range of topics dealing with juvenile delinquency, and offer a striking testimony of the earnestness with which the United States are grappling with the problem. A few of the subjects dealt with in this book are— "Personality trends in Children," "Function of the Mental Hygiene Clinic in the Schools and Colleges," "History and Development of Institutions for the Study of Children," "Probation," "Organization of Family Courts," and "Chancery Procedure in the Iuvenile Court." The effect of environment upon the adolescent, his craving for abnormal experiences and adventure, his increasing independence owing to the fact that his quickness and adaptability make him a good wage-earner before he has learned to spend money wisely, are reviewed in their possible influence upon delinquency. Why is it that the auto-thief is usually a boy, and that the hold-up man is rarely more than 25 years old? Are the young adults (under 22), who form 40% of the prison population, irretrievable criminals, or are court procedure and the social system at fault? These are some of the questions which are being investigated.

Dr. William Healy writes in his paper, "The Psychology of the Situation ": "We have come to know that the deepest necessity in each and every case is for holding fast to the conception of 'the situation 'as a whole. This means the interplay, the interweaving of the individual and his environment, the universal and inevitable interrelation of these two." This sounds the keynote of the principles upon which psychiatric work with juveniles is carried To quote from another contribution: "We are brought to the point of view of Healy, expressed by him many times, and clearly exemplified in his writings. This point of view stresses the fact that in the individual case there is usually found not one, but a number of causations; that multiplicity is the rule, and that the combinations of causations are extraordinarily varied from case to case. Multiplicity of causation requires multiplicity of resource in treatment. Apparently no single social agency can be omitted

from taking part in the programme."

In the section on "Chancery Procedure" the problem is stated as follows: 'Are you guilty or innocent of the specific crime with which you are charged?' That was the question put to the jury and the charge brought against the youngster in the era preceding 1899. We ask instead at this time, 'What are you? How have you become what you are? Whither are you tending and how can we direct you? I will not say "lead"—how can we direct you that you may go along the straight path that leads to good citizenship?' Without a thorough examination we cannot know the child. We must have not merely the heredity, not merely the environment; we must have the physical, mental, and the psychic make-up of the child. There is not one of the most recent and modern sciences that we can dispense with. We must reach into the soul-life of the child. That is the fundamental thing, and so we need the expert psychologists and psycho-pathologists to deal with the child before the judge has occasion to determine what is the wise thing to be done."

All the resources of the community are brought to bear upon the problem, and this is rendered possible by close contact between psychiatrists, social workers, schools, employers of labour and other agencies, which should be at once an example and an incentive to us in Great Britain. In the United States there are no less than nine clinics which are closely associated with the Juvenile Courts, while some fifty other clinics offer psychiatric service.

How far the Court should stand in loco parentis, which is the aim in the States in dealing with the delinquent child, must be determined by experience. Interference with the rights of the parents is not to be advocated without due consideration. Moreover the success of these methods in dealing with delinquents is not yet assured. Institutions for delinquents have been criticized severely, not without reason.

The book should be read by all psychiatrists, social workers and others who wish to play a constructive part in the mental hygiene programme which, it is hoped, will before long be put into practice in our country.

W. S. Dawson.

Social Psychology. By Knight Dunlap. Baltimore: The Williams & Wilkins Co., 1925. Agents: Baillière, Tindall & Cox. Royal 8vo. Pp. 261. Price 20s.

The author, whose work in this field is so well known, opens his subject by disclaiming any special view on social psychology which he wishes to put forward, and also disarms criticism by explaining his reasons for wandering so far afield under the limited title of the book. His definition of mind, as the sum total of the conscious responses or reactions of the individual, seems to call for comment, but it is explained at an early stage that when he speaks of "conscious" he also includes the "unconscious," while with instincts, as primary determinants of behaviour, he will have nothing to do. As regards racial and class differences, he has nothing good to say of the hereditary claims of these, and is reasonably in doubt whether the extinction of the so-called "superiors" would be an evil or a blessing. Especially scathing are his comments upon the great "Nordic" race of Deniker and others, the Teutonic blonde beast of Nietsche, and the assumptions of this or that race to be the 'chosen

people' he regards, probably correctly, as a form of national paranoia—if that word is used in a conventional and not a clinical sense.

Prof. Dunlap takes the sane and sound view that as far as social psychology is concerned, sex differences can be summed up in the accepted fact that the total emotional life of a man differs profoundly from the total emotional life of a woman, hence its value in the cohesion of the family. The chapter on marriage and the family, in which he traverses the view put forward by Lubbock and others contains many pithy sayings of great interest. reviewing various theories as to the origin of religion, and without entering into the complexities of animism and the "fear" theory, he concludes that the only theory of value to-day is that its origin is due to dissatisfaction with life and the mundane system generally, and makes an amusingly cynical distinction between persons who are socially highly religious, but personally not at all; finally expressing the opinion that until we can succeed in teaching morals quite apart from religion the structure of society and the progress of individuals within it are in serious and continuous danger—a point of view we believe to be quite sound, though it might make in certain quarters interesting material for debate. Social progress is conditioned by a knowledge of the principles governing all those forms of social organization, such as the family religion and state, improvement in social life is closely associated with individual improvement; hence the arrival on the scene of the programme of Eugenics, concerned with the idea of repression of the "unfit," and the increase of the "fit," followed by the difficult question, "Who are the fit?" calling to mind Huxley's dictum, "Every pigeon cannot be its own Sir John Sebright." Prof. Dunlap wisely points out that many persons are unquestionably "fit" in one sense of the term, but that they are the "fittest" from the eugenic point of view is not so certain, and finally concludes that the only practical programme for eugenics is the negative one, and his discussion on the vexed questions of the "lethal chamber," "sterilization," "prevention of mating," and "contraception," is well balanced and The final chapter upon the principles of social organization deals with a variety of modes of social consciousness and the difficulty and futility of excessive legislation (so pertinent a subject in modern civilization), which calls to mind the excellent critical definition of the French writers, who invented the term "nations policés" as a substitute for civilized nations, suggesting that the appearance of the policeman marks a period of social degradation, as pointed out by Edward Carpenter.

The book is interesting, frank and outspoken, and gives a clear and well-balanced view of the side of social psychology selected by the author, and though many controversial points are dealt with in a didactic manner, for the purpose the author has in mind this is a virtue rather than the reverse. The chapter on propaganda is equally useful for "putting over" the virtues of a soap or a theory, and the methods are well treated from a socio-psychological point of view.

I. R. W.

The Development of Psycho-analysis. By S. Ferenczi and Otto Rank. New York and Washington: Nervous and Mental Disease Publishing Co., 1925. (Monograph Series, No. 40.) Pp. 68. Price \$2.

This small volume is intended primarily for practising analysts, and serious students of the subject who have not read the original German version should welcome this outline of the development of psycho-analytic technique by two such eminent pioneers. It is pointed out how, in contrast to the enormous theoretical growth, there has been a neglect in literature of the practical aspects. The authors discuss the psychology of the analytic situation, and summarize the actual meaning of the analytic treatment as "an unwinding process of the libido within a definite space of time, in the course of which all the demands of the infantile libido find a partial fulfilment in the transference; in reality, however, these demands, simultaneously with their being granted a sort of phantasy gratification, experience a gradual resolution culminating in their conscious adjustment." Though to a great extent the analyst is to maintain a passive attitude throughout, he must intervene actively to correct the neurotic process. In the first part of the analysis the ego is educated to recognize libidinal expressions contrary to it and prevent the old habit of repression; and later. when the transference is in full sway, the libido fully unfolds, and the new ego-ideal sees that the freshly aroused desires are adapted to reality. Sublimation, which otherwise ordinarily would require years of education, now rapidly and spontaneously takes place. In a historical retrospect past mistakes in technique are dealt with. A mere "talking out" of descriptive symptoms or the collecting of associations can have no definite therapeutic effect if the dynamic factors are neglected. The interpretation is not the chief aim of analysis, and another faulty method was the analysis of symptoms, which has now long been given up. It is the whole personality which must be dissected. Practical analysis should not consist of merely dealing with complexes one after the Too much knowledge may lead the analyst to the searching of constructive elements of the theory with neglect of the actual task in view. For any emotional factor to be in any way effective it must be revived into some present reaction when there is a possibility of uncovering the roots of the actual reaction in the past. An interesting chapter discusses the reciprocal effect of theory and practice, and stress must be laid on the statement, which is very true, that "the theoretic analyst is in danger of looking for arguments to prove the correctness of a new statement, while he thinks he is promoting the process of curing a neurosis." within these pages goes to show that most of the defects of technique and difficulties in treatment are the result of insufficient realization of the nature of the psycho-analytic method and aim. A careful study of this book should do much to obviate any want of correct orientation. "Too much knowledge on the part of the patient should be replaced by more knowledge on the part of the

analyst." It is highly interesting to note that in their concluding chapter these writers believe that the whole development of psychoanalysis will tend in the near future to become essentially simplified, and that the point may be finally reached when other psychotherapeutic methods which have proved themselves useful according to analytic understanding will be legitimately combined with psycho-analysis. It, too, must be noted that they say there will be trained therapeutists who need not necessarily be doctors, as to-day physicians are actually laymen in psychological matters. The book is pregnant with valuable information, and the increasing body of practising analysts will find herein much that will be of great practical use.

C. STANFORD READ.

Psycho-analysis and the Psychic Disorder of General Paresis. By S. Hollós and S. Ferenczi. New York and Washington: Nervous and Mental Disease Publishing Co., 1925. (Monograph Series, No. 42). Price \$1.50.

If we adopt the widest conception of the psychoses and believe that they are due to reactions of an integrated organism, and that the whole personality must be involved, whether the fons et origo lies seemingly in the mental or bodily sphere, we can understand that psychological factors must enter into every type. Those who take up a purely materialistic point of view in psychiatry would assuredly point to general paresis as the one form of psychosis to which any psycho-analytic doctrine could not possibly be applied. In these pages the authors reveal this to be a fallacy. There have been attempts to explain some of the paretic symptoms-more especially the delusions of grandeur—on neuro-pathological grounds, but they are very unconvincing, and recently von Monakow has not only emphasized their inadequacy, but has pointed out that the bio-genetic factors have not received their due. Though Bleuler many years ago showed that in the organic psychoses mental mechanisms on Freudian lines could be proved to exist, until now psycho-analysis has not brought general paresis into its This volume attempts to prove that the principles of psychoanalysis can throw a flood of light on its symptoms as it has done in other neuroses and psychoses. We must recollect that it has only been through this modern psychological conception that any real meaning has been given to a psychotic picture which was previously only described in detail and regarded as bizarre. authors here, from detailed cases, show how the various symptoms are psychically determined, and discuss the mechanisms. sion, affective factors, defensive mechanisms, delusional wishfulfilments, compensatory processes, etc., are all seen to act their part when the symptoms are viewed from this angle. Finally, the theoretical considerations of these findings are discussed in some detail, and the reader can only follow this if he is fairly conversant with recent psycho-analytic work. The narcissistic results of bodily disease and what Ferenczi terms "the patho-neuroses" are dealt with, as is also the conception of how quantities of libido can be

locked up in sick organs spoken of. A disease of an erogenous zone can produce a psychic illness (a puerperal psychosis for instance), and it is pointed out how such narcissistic psychoses as melancholia are not infrequently cured by the intervention of some intercurrent disease which imprisons the surplus libido. There are, the writers think, good grounds for the assumption that the brain is especially possessed of narcissistic libido and represents the central organ of the ego functions. The brain infection in paresis acts therefore as a trauma, and results not only in defect symptoms, but through a disturbance of the narcissistic equilibrium produces the special symptoms of that disease. So the neurasthenic commencement is due to the withdrawal of libidinous interest from the sexual object; the later hypochondriacal symptoms result from the painful storing up of narcissistic libido in the bodily organs; depression is produced by the loss of the once fulfilled ego-ideal; the euphoria and grandiose delusions are triumphal reactions over the melancholia with wish-fulfilment and a regression to an earlier stage of omnipotence. The delusional content shows much evidence of the projection of inner feelings. "The world is destroyed" really points to the ego loss, and compensatory ideas of re-birth can be noted in many of the exalted delusions. The greater the personal deterioration, the more ideas of all-powerfulness become evident as a defence. Even complete dementia, according to psycho-analysis, would not be explained exclusively on the basis of destruction of nervous tissue. Even the fulminating form of paresis is given its special psycho-analytic pathology.

Those who cannot accept psycho-analytic theory will probably regard these views as mere jargon, but in spite of prejudices there remains much that must stimulate thought. There must be an underlying reason for the emotional reactions and special delusions noted even in such a patent organic disease. Shall we be content with merely regarding them as the result of personal idiosyncrasy, or of some such factor which scientifically carries us no further? Can we possibly correlate psychic symptoms in any way with morbid changes in nerve tissue? Advance in psychiatry surely will only come about through regarding the mental patient as a unit whose whole personality, bodily and mental, is reacting to the stresses from within and without. It would seem that this monograph marks a psychiatric milestone which must command attention.

C. STANFORD READ.

Essentials of Psychiatry. By George W. Henry, M.D. London: Baillière, Tindall & Cox, 1925. Medium 8vo. Pp. xiv + 199. Price 13s. 9d.

The author tells us that in his initial studies of mental disorder he felt handicapped by the omission from the literature of psychiatry of any "presentation of those mechanisms which underlie abnormal behaviour." From his experience as senior physician to the Bloomingdale Hospital he now attempts to supply that omission in this small volume; and in the opening chapters describes the development of personality and the evolution of disorder of

personality following on conflict.

Dr. Henry rightly stresses the importance of obtaining the complete life-history in the affective, paranoic, paranoid, schizo-phrenic psychoneurotic psychoses, and the deviation from the normal in cases of constitutional inferiority; but we do not quite follow him in his classifying the toxic and organic psychoses as personality diseases or disorders. The mental symptoms of the various affections are tersely portrayed and illustrated by life-histories.

Treatment is considered mainly from the psycho-therapeutical point of view. There is an excellent article (by Miss Adele Poston) on the nursing of the psychiatric patient from the onset of his illness to his convalescence.

In an interesting application of the psycho-pathology to the normal, we are told that Theodore Roosevelt possessed a manic temperament as compared with the depressive personality of Abraham Lincoln.

The volume closes with short chapters devoted to special nursing precautions, first-aid emergencies, mental hygiene and psychiatric social service. A bibliography is appended.

As a general introduction to the principles governing the origin, development, care, treatment and prophylaxis of mental disorders and the neurosis this book can be recommended to the student and practitioner.

H. DE M. ALEXANDER.

## Report of Commissioners of Prisons for the Year ending March 31, 1925. H.M. Stationery Office. Pp. 79. Price 1s. 3d. net.

This report shows a slight decrease in the average daily prison population (10,750 as against 11,148 for the previous year). In this connection the Commissioners write: "Another important factor is the operation of the Mental Deficiency Act, by which during the last four years nearly a thousand mental defectives who had come in conflict with the law have been withdrawn from the army of habitual offenders and placed in institutions."

The following table shows the coincidence of insanity and criminal action:

				Males.	Females.	Total.
In local prisons				84	13	97
On remand or awaiting t	rial	•		191	46	237
Insane on arraignment	•	•		14	6	20
"Guilty but insane"	•			13	8	21
Convict and preventive de	tention	priso	ns	15		15
Borstal institutions .	•			2		2
					'	
Total	•	•		319	73	392

In addition 41 men and 5 women were certified as mental defectives, 19 men and 5 women were removed to institutions by orders of the Secretary of State, and 35 men and 8 women were handed

over to the care of local authorities, their sentences having expired before action could be taken under Section 9 of the Mental Deficiency Act. In addition to the mental cases referred to above, 1,523 men and 490 women were remanded to prison for examination into their mental condition. In this connection the Commissioners again draw attention to the difficulties caused by the "existence from birth or an early age" clause in the Act.

The Medical Officer of Brixton writes: "Those found definitely defective but not quite certifiable far outnumber those reported as defective. These borderland cases are most unsatisfactory. One feels that the short terms of imprisonment, which are all that most of them can receive, do little good to the prisoners and provide a very short respite to the public. This is particularly so in the cases of sexual perverts, many of whom are slightly defective. It is certain that punishment is as a rule impotent to deter them.

. . . Sooner or later the question of their permanent segregation will have to be faced."

The Medical Officer for Birmingham Prison returns again to the urgent problem of an adequate psychological examination. "It is only by the persistent and intensive investigation of large numbers of cases that we shall obtain any light upon the problems of the causation and the proper treatment of delinquency. Courts may feel that the results of psychological examinations are often worthless, since the only forms of mental abnormality now officially recognized are those of certifiable insanity and mental deficiency. This, however, is a very superficial view to take. It is quite true that there are mental abnormalities for which legal provision, now non-existent, should be provided. But the very existence of such abnormalities can only be determined by medical examination. The probation system could be applied with much more consideration of the psychology of those submitted to it. No system of probation can ever be of real service until adequate psychological assistance is provided and regularly made use of. . . . There is a large group of cases which have been described under the unsatisfactory title of 'psychopathic personality,' as well as under other equally objectionable titles, but the nomenclature is comparatively unimportant, for the group is well recognized, although ill-defined. In my view some of these cases are simply minor degrees of what is, in a more advanced form, now treated as certifiable insanity. But whether this view is correct or not, it is clear that these cases are inadequately handled under the present system."

The Medical Officer of Holloway writes in a similar strain. He urges, moreover, that the class "moral imbecile" should be abolished altogether, whereby another difficulty inherent in the present Mental Deficiency Act would disappear. This would be in general accordance with the views now almost universally held by psychologists that the moral imbecile does not exist as a separate class apart from the state of feeblemindedness.

G. A. Auden.

## Part III.—Epitome of Current Literature.

## 1. Neurology.

Vasomotor Syndromes in the Brain, Ear and Eyes [Syndromes Sympathiques Vaso-Moteurs Cérébraux Auriculaires et Visuels[. (Ann. Méd.-Psychol., October, 1923.) Laignel-Lavestine, M.

The sympathetic system influences the psyche in three ways, physiological, affective and intellectual. Many cerebral syndromes seem to be allied to morbid states of the sympathetic, e.g., migraine, epilepsy, vertigo, hypochondriasis, melancholia, anxiety states, etc. Migraine, cephalic vaso-dilatation, hypomania with vaso-dilatation or "hyperchondriasis," and epilepsy are considered, and it is demonstrated how closely these are linked with vaso-motor disorders. Vertigo and visual disorders are also due in many cases to local angiospasms, and an attempt should be made to treat them accordingly. W. D. Chambers.

Psychic Manifestations in Cases of Brain Tumours. (Amer. Journof Psychiat., April, 1925.) Moersch, F. P.

Practically all patients afflicted with brain tumours have mental symptoms at some stage of the disease, and this paper is an attempt to answer the question as to whether, in spite of their fluctuations and extreme variability, these psychic phenomena are worthy of study as an aid in diagnosis. The material on which conclusions are based consists of 239 cases of brain tumour in the Mayo Clinic in which fairly accurate records of the mental state had been made, all of them exhibiting mental changes at some stage or other, 73 of them in a definite degree. The tumours were chiefly of the cerebrum, especially in the forward areas. In most cases psychic phenomena were purely generalized and often ill-defined, such as irritability, listlessness, hebetude and neurasthenic symptoms, these having no localizing value. As the disease progressed, apathy, stupor and coma sometimes supervened.

In all cases of bilateral frontal lobe tumours there were marked mental symptoms, occurring late, however, in cases of slow progress. By grouping together these mental reactions it was observed that progressive mental "let-down," forgetfulness, confusion of thought, affective disturbances, lack of comprehension, emotional disturbances and motor phenomena of an apractic nature were common and characteristic. Frontal lobe tumours may exist for a long time before any symptoms are observed, but when they are produced the above complex of mental reactions is sufficiently characteristic and frequent as to warrant the term frontal lobe syndrome being applied to it. There is no difference in the syndrome when a right or left lobe is involved alone, and while the tumours producing such symptoms are usually large, a small frontal abscess may produce quite as typical a picture.

Fronto-motor lesions may present mental manifestations identical with pure frontal lesions, but may be readily differentiated by associated neurological findings. Temporal lobe tumours and supracellar growths may also at times closely simulate frontal lobe reactions, but as a rule the mental phenomena are not so characteristic and present more generalized psychic changes. Aphasia and apraxia are of special interest in tumours of this locality.

From the psychiatric standpoint the outstanding mental reactions in tumours of other parts of the brain are as follows: Psychoneurotic reactions, confusional states, dementias, depressive reactions, dementia præcox reactions and reactions due to encephalitis or syphilis. No localizing value can be attached to these. Associated mental disturbances, which may be quite independent,

are accentuated or precipitated by the disease.

Psycho-neurotic manifestations, especially neurasthenic states, are frequently premonitory evidence of tumours, but these symptoms are purely generalized, and at present there is no means of avoiding an error in diagnosis unless focal neurological signs such as choked disc are present. Mental changes suggesting general paralysis are common and are at times extremely difficult to differentiate from frontal lobe tumours, especially as the presence

of positive serology does not rule out a neoplasm.

To sum up, psychic changes in brain tumours tended to arrange themselves into three groups: (i) General symptoms, vague and rarely of localizing value though sometimes serving as a clue to a correct diagnosis. The more generalized of these are neurasthenic states, mild personality changes, anxiety states, depressive reactions, mental confusion and deteriorating states. (ii) Specific mental reactions, which, when present, in the absence of focal neurological signs, are very suggestive of a lesion in the forward portion of the cerebrum. These may be of varying intensity, show marked fluctuations and usually appear late in the disease, the minor premonitory changes probably having been overlooked. These are changes in personality, lack of memory, interest and attention, impaired insight and judgment, poverty of thought processes and disturbances of general motility. (iii) Associated mental reactions: This includes mental states associated with brain tumours in which a direct relationship is difficult to establish, and undoubtedly a new growth is likely to precipitate psychic alterations, especially in neuropathic individuals. Thus hysterical episodes, maniacal or other psychotic states leading to institutional confinement may at times be quite independent of the effects of the neoplasm.

A. WILSON.

Effect of Organic Changes in Brain and Spinal Cord on the Subarachnoid Space, Choroid Plexus and Cerebro-spinal Fluid. (Arch. of Neur. and Psychiat., October, 1925.) Hassin, G. B.

Some maintain that the cerebro-spinal fluid originates in the lateral ventricles from the choroid plexus; others maintain that the ependymal cells of the ventricles and the spinal canal as well as other formations (the "infundibular" gland, the paraphysis and

the epiphyseal rudiments) also participate in its production. Some hold that the peri-vascular channels of Virchow-Robin are contributing agents, whilst a few assert that the choroid plexus has nothing to do with the cerebro-spinal fluid, a product of the brain tissues.

Hassin produces evidence that the fluid is most likely a product of the tissue fluids of the central nervous system, and that, like the villi of the arachnoid, the choroid plexus is not an organ of secretion. but of excretion or absorption of some contents of the fluid. found that carcinoma cells followed very much the same route as Weed found Prussian blue granules did when an isotonic solution of equal parts of potassium ferrocyanide and iron-ammonium citrate were injected into the lumbar region. From this evidence he concludes that the fluid flows away from the brain and toward the Pacchionian bodies, that communication exists between the subarachnoid and perivascular spaces, and that the contents of the perivascular spaces are discharged into the subarachnoid space. According to Hassin the fluid originates in the brain-tissue, and carries the waste products of the perivascular channels into the ventricles and the subarachnoid space for final elimination by the villi of the arachnoid and the choroid plexus. He found in a case of ventricular hæmorrhage that the tuft-cells of the choroid plexus contained large quantities of blood-pigment absorbed from the hæmorrhagic focus. In degenerative conditions of the brain, the tuft-cells of the choroid plexus are so densely covered with lipoids that some are transformed into typical Gitter-cells.

G. W. T. H. FLEMING.

The Thalamus in the Physiology and Pathology of the Mind. (Arch. of Neur. and Psychiat., September, 1925.) Dercum, F. J.

In this article the author includes in the term "thalamus" the structures comprising the thalamencephalon, i.e., the epithalamus, the hypothalamus, the thalamus so-called, and the metathalamus. It is composed of a paleo-thalamus and a neo-thalamus, the former being composed of the epithalamus and the hypothalamus, subserving the functions of smell and taste, and receiving impacts from the viscera and the body generally. The neo-thalamus comprises the thalamus so-called and the metathalamus, and is concerned with touch, pain, temperature and other somatic sensations, together with the pathways for light and sound.

The author attributes to the co-ordination of impulses coming into the thalamus the birth of new sensations and new feelings due to the summation of sensations in the thalamus and not to impacts from without. This may express itself negatively in a feeling of placidity, or positively in a feeling of discomfort, distress or pain. He claims that the entire gamut of sensations, feelings and emotions have their seat in the thalamus, whether the sensations be simple, as touch or sound, simple emotions, such as like or dislike, love or hate, or our most refined and sublimated æsthetic experiences. The thalamus is largely under the control of the cortex, but feelings and sensations, if of sufficient intensity, will always break in.

The author divides the endocrine glands into a catabolic group—the thyroid, pituitary and chromaffin system—and an anabolic group—the thymus, parathyroid and pancreas. The catabolic group increases the speed of transmission of impulses in the cortex, and increases the volume of thought; hence the person thinks more actively, and the field of his consciousness is enlarged. When the anabolic group is more active, thought is less active and the field of consciousness is contracted. Probably the action of the endocrines on the thalamus excites the primitive sensations of hunger, thirst, fear and anger, and also the generalized feelings of comfort, contentment and well-being, or of discomfort and distress.

When abnormal or toxic substances are present in the blood, given nuclear aggregations in the thalamus are pathologically stimulated and give rise to hallucinations. When these are transmitted to the cortex they are interpreted as things coming from without; hence we have the birth of delusions of reference. The presence of painful and distressing hallucinations may give rise to the idea of being poisoned; hence arise delusions of persecution. The more acute hallucinations noted in delirium and confusional states find a ready explanation in the action of toxins on the thalamic In manic-depressive insanity, in the melancholic phase, the anabolic group of glands are below par; hence the weakness and exhaustion, atony of digestive tract, loss of weight and strength, etc. The expenditure of energy is at a minimum. Recovery may overshoot the mark and we find the activity and restlessness of the manic phase. The emotional pain of melancholia is to be referred to the thalamus, and is explained by the abnormal sensations coming from the digestive tract, circulatory system, etc. melancholia the patient refers all these feelings of mental pain to himself, unlike the paranoic and paranoid patients. Some of the impacts received by the thalamic nuclei lead to the so-called visceral hallucinations. The mental retardation of melancholia is easily explained as the effect of toxins acting on the synapses. In mania there is a general speeding up of transmission, hence increased motor outflow and the bizarre associations.

In conclusion, the author emphasizes the fact that the thalamus also profoundly influences metabolism viā centres in the floor of the hypothalamus in close relation with the visceral nuclear aggregations.

G. W. T. H. FLEMING.

Gentian Violet Intravenously in Chorea and Encephalitis. (Journ. of Nerv. and Ment. Dis., October, 1925.) Visher, J. W.

Three cases of encephalitis following typhoid and one of chorea with endocarditis are reported in which prompt recovery followed the intravenous administration of gentian-violet (10 c.c. of a 1% solution). The drug is quite non-toxic in the dosage used and there was no febrile or other reaction. Improvement commenced within a few hours in all cases, and in only one case was a second injection deemed necessary.

G. W. T. H. Fleming.

Perspective in Relation to X-Ray Interpretation (A Study in Apperception). Cotton, W. [A pamphlet. Bristol: 1925.]

This is the text for a lantern demonstration prepared for the recent International Congress of Radiology.

Dr. Cotton's thesis can be put in a very few words. It is that the X-ray image can only be seen in correct perspective from a view-point which is the same distance from the sensitive surface as the focus of the X-ray tube used, and on the same side of it. This is of course quite correct; it is the same proposition that arises in the case of a print made from a negative taken with a lens of which the focal length is short in comparison with the length of the plate or print. Here we must view the picture from a distance equal to the focal length of the taking lens, otherwise the perspective is wrong, for except in the optic axis, images are enlarged in two directions—vertical and horizontal—and the spaces between these images are similarly enlarged; this distortion increases outwards from the optic axis.

It has to be remembered that the laws of geometrical optics, and therefore of perspective, are only valid up to the retina, or probably to the visual cortex. What we do with the images received there is quite another matter, and fallacies of interpretation arise. Dr. Cotton deals with certain of the distortions. Experience shows the great importance of attention in visual judgments, and anything which makes attention easier tends to become more prominent. What Dr. Cotton calls by the name of "the visual prepotence of the opaque" is only the tendency to attach undue importance to a sharply defined, dense area as against a more diffused image of varying density.

If we look at a print from a negative from a distance equal to the focal length of the taking lens, we experience a sense of what is best termed a "plastic" effect, though some have gone so far as to call this a stereoscopic relief, which of course it is not. Similarly we may look at our X-ray picture through a lens of the focal length equal to the distance between the X-ray bulb and the sensitive surface when the exposure was made, when we shall again get correct perspective. Or we may do as suggested by Dr. Cotton—reduce the size of the picture and the viewing distance in the same proportion till we get a convenient distance to view the picture.

Dr. Cotton speaks of "conversion of relief." This cannot be obtained from a single two-dimensional picture except in the well-known case of simple geometrical diagrams. It is not possible to "convert" the relief in pictures of natural objects.

It is unnecessary to point out that the two successive exposures of a long bone for use in a stereoscope must be by a shift at right angles to the bone, and not parallel to it. As a matter of experiment, with an ordinary stereoscopic camera and natural objects with horizontal and vertical lines, it will be found that although the usual horizontal shift gives the greatest relief, any shift, even vertical, will give some degree of relief, which is certainly greater than the "plastic" effect referred to above.

R. J. S. S.

### 2. Psycho-Pathology.

Bodily Cleanliness and the Functions of the Sphincters [La Malpropreté Corporelle et les Fonctions Sphincteriennes]. (Ann. Méd.-Psychol., July, 1923.) Courbon, P.

An examination of the psycho-physiological factors in uncleanliness and of its manifestations, normal and morbid. After a historical review of the subject the physiology of the excretions is described, and a distinction drawn between "coprochesia"—a mere untimely evacuation—and "coprochresia"—a morbid utilization of the dejecta. A number of subdivisions are described under each class.

Among animals such degree of cleanliness as exists appears to be

æsthetic in origin and not utilitarian.

Genuine desire for cleanliness in man is not only not innate, but is of recent development.

W. D. Chambers.

A Suggestion towards a Theory of Manic-depressive Insanity. (Brit. Journ. of Med.-Psychol., December, 1925.) McDougall, W.

McDougall points out that the opposite of excitement is not depression, but calm, rest or indifference. When we find a disorder which expresses lack of due balance and proportion between the affective tendencies we are dealing with a psychogenic disorder. He points out that exaltation, not excitement, is the true opposite of depression. Excitement may accompany depression, as we find in agitated melancholia. He concludes that manic-depressive insanity is a psychogenic disorder.

The normal man's sober, critical view of himself and the world is made up of an equal balance between the instincts of selfassertion and self-abasement or submission. McDougall's theory is that the disorder results from the upsetting or the disturbance of the normal balance, and co-operation of the two impulses of self-assertion and self-abasement within the sentiment of self-regard. This balance may be upset in three different ways: Firstly, external circumstances may be such as greatly to favour one relatively to the other, i.e., bad luck, lack of success. Secondly, changes of the body metabolism may have similar effects. Thirdly, the seat of the disorder may be within the sentiment of self-regard itself, leading to a species of dissociation of the two impulses. elation is the primary feature of mania, so anger is a secondary feature. The maniac is quite happy until he is obstructed or thwarted. In a similar way the corresponding affect of the depressive phase, self-abasement, is apt to be complicated by fear. The ceaseless activity of the manic is due to surplus energy, which in the normal person is used up in maintaining equilibrium between self-assertion and self-abasement. McDougall believes that all instinctive energies draw on a common fund of energy, and so when one instinctive tendency or group of such tendencies organized in a sentiment dominates all the others, it may be regarded as enjoying a virtual monopoly of the vital energy. The flight of ideas is due to lack of balance and judgment; the tendency to self-assertion bears everything before it. At the same time it economizes energy, because there is no resistance to it.

McDougall points out that although manic-depressive insanity is a functional disorder, yet it is not susceptible to any form of analytic treatment.

G. W. T. H. Fleming.

Significance of "Accessory" Behaviour Accompanying Vocal Reactions. (Arch. of Neur. and Psychiat., November, 1925.) Hohman, L. B.

Hohman points out that the verbal response to a given stimulus is not the total response; there are many other expressive movements or motor responses. There may be automatic activities, such as changes in respiration, blushing, sweating, pupillary changes and changes in the body tonus. There may be changes in posture, and muscle relaxation or rigidity. There may be changes in facial expression. The existence of muscular tensions and postures is of particular importance in psychopathology. Corresponding to the shaking and nodding of the head for negation and acquiescence, there are other more complicated activities which are known as gestures. These may take the place of actual vocalization when the individual is at a loss for words. There is in maniacal excitement a great deal of activity that is not vocalized, but expressed in movements, grimaces, tensions and other accessory movements. On requesting the patient to stop moving, the talk of the patient becomes more rational. Smiling in many cases serves to deny the meaning of one's words. In some patients the request to give up smiling results in a much nearer approximation to the truth. Treatment aims at removing patients from exciting situations, minimizing stimuli by putting them in warm baths and talking to them in a voice just loud enough to be heard.

G. W. T. H. FLEMING.

The Conception of Sexuality. (Brit. Journ. of Med. Psychol., December, 1925.) Hadfield, J. A., Glover, J., and Shand, A. F.

(1) Hadfield defines as sexual that group of impulsive tendencies whose natural end is reproduction. This includes as sexual the normal act of reproduction, any direct stimulation of the sex organs, the sex perversions and tendencies, like self-display, which appear normally to have a sexual end. It excludes sucking and interest in fæces, except in so far as these appear in the sexual perversions. The sexual perversions he is careful to point out arouse sex impulses whose natural end is reproduction. The self-assertive and submissive tendencies are sexual only when directed to purely sexual aims. The submissive impulse is derived from three sources—submission to the herd, to the parent, and to the male, i.e., social, self-preservative and sexual.

Thumb-sucking, urination and the passing of motions do not come under the terms of the definition, since the impulses to which they give rise do not naturally lead to reproduction, but to ends which are egoistic. Neither the activities themselves nor the

pleasures derived from them should be called sexual. Thumbsucking is a perversion of the nutritive instinct. The arguments adduced by Freud in applying the word "sexual" to early sensuous activities are, that clinical evidence supports it, that stimulation of the pre-genital zones in children produces genital sensations, that the activities of the pre-genital zone are organized and brought into subordination to the genital zone, that these activities persist in sexual perversions, and that it is difficult to say where the sexual begins, since the same common feeling characterizes these infantile activities as well as the definitely sexual tendencies of adult life. Hadfield considers these arguments, apart from the clinical evidence, as quite inadequate. The difficulty in drawing a line between sex-feeling and other infantile gratifications is due to defining instinctive tendencies in terms of feeling or affective tone instead of in terms of direction or end. Hadfield considers that the psycho-analysts have perverted the use of the word "sexual," they tend to make the word "sexual" synonymous with "sensuous gratification." Hadfield emphasizes that sex signifies the whole instinct in its cognitive, affective and conative aspects towards repro-"Erotic" refers to the feeling tone or sensuous duction. gratification. The word "libidinous" emphasizes the conative aspect. Love, of course, is a sentiment. In summarizing, he says: "'Sexual' differs from 'erotic' in that it emphasizes the whole conative as well as the sensuous element. It differs from "libido" in that while the latter may refer to all pleasurable cravings, sex refers to those only whose natural end is reproduction. It differs from love in that it is the activity of only one instinct, whereas love is the activity of the whole personality.'

(2) Glover advances three criteria—the teleological, the descriptive, and the genetic. He considers the words "natural end" in Hadfield's definition better served by the word "goal." There is a difference between a biological goal and a psychological one. Psychologically speaking, the goal of the conative activity occasioned by hunger is eating, not nutrition, as the biologist would maintain. He would also use the word "coitus" instead of "reproduction" in the definition.

The perversions are to be regarded as sexual, because to the pervert they give pleasure which is identical with the pleasure derived from coitus, and not because they cause genital excitation which normally would result in coitus. He does not agree with Hadfield that "a child's curiosity in its fæces or in the passing of water is not essentially different from its interest in its food or in strangers." The child obviously shows shame and guilt. According to Glover, the aggression impulse is the basis of sadism and is sexualized in early childhood, and not later, as Hadfield maintains. The author asks if the abortive attempts at coitus of a day-old kid can be described as anything else but sexual. Are attempts at coitus in young children not to be regarded as sexual because owing to their age these attempts cannot subserve the natural end of reproduction? Glover emphasizes the importance of regression, which shows that libidinal tendencies have followed a certain path of development,

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and can, under certain circumstances, retrace it in the opposite direction to early points of libidinal fixation.

(3) Shand points out the importance of the fact that only some mothers and some infants have libidinal sensations in suckling and It is the same in the arts of painting, poetry and music-all of them are occasionally sensuous, but to argue that therefore they are essentially sexual is a very unsound argument. It is no part of the functions of the mouth, breasts or anus to arouse sexual sensations in normal persons. If the psychoanalytic theory that "erotogenic zones," "curiosity," aggression and submission phantasies and fetichisms are to be included in the sexual, and that infantile impulses are in part libidinal and in part egoistic, it must be shown that it is part of our common human nature that normally they should excite these sensations. Shand points out that the sentiment of love grows up on a basis of tender emotion and not libidinal gratification. He also emphasizes the difference between sensuous and sensual, and thinks that in regard to the erotogenic zones, resemblance has been confused with identity. We often identify sensations that are, on closer inspection, found to be different, or the apparent identity may be due to the blending of sensations, as so often happens with taste and smell. In kisses that are sensual, because they arouse genital sensations, there is a thrill of sensation extending from one zone to the other, and the qualities belonging to both may be blended. In considering the genetic criterion and infant sexuality, Shand emphasizes the fact that in order to prove that sucking provides a libidinal sensation, it must be shown that in all children sucking is accompanied by genital excitement, but this is not so. only an occasional effect. Shand's conclusion is that the genitals alone are essentially sexual organs, in the sense that it is part of their functions to arouse libidinal sensations. These sensations are as proper to them as other sensations are to the mouth, breasts and anus. A great variety of other things are occasionally sexual, in the sense of becoming stimuli of libidinal sensations in certain situations and with certain persons. Perversions are always sexual, because here we class apart the cases where an erotogenic zone or symbol is habitually used to excite sexual pleasure.

G. W. T. H. FLEMING.

Stammering as a Neurosis. (Journ. of Nerv. and Ment. Dis., October, 1925.) Gregory, M. S.

During the first year the infant is a despot possessed by an overwhelming emotional tone, and the conduct of the mother towards her infant has much to do in shaping its future reaction to environment. One type of mother spends hours caressing the body of her infant, rubbing, patting, etc., and in every way increasing its eroticism. The other type of mother makes its toilet, feeds it and puts it back in its cradle to play, sleep and develop in a normal, reasonable manner. The first child may be potentially ruined, while the second probably remains happy and free from neurosis in adult life. At the beginning of the second year the

mother insists on obedience and cleanliness and punishments occur. Great repressions begin to take place. Repressed libido leads to dread, fear and anxiety. Could the child grow up with no scoldings or whippings, no secrets to keep, no inferiorities to hide, no primitive instincts to master and subdue there would be no neurosis and therefore no stammering according to Gregory. Love not returned makes a child sad, depressed, irritable and at times hateful. Stammering usually begins between 3 and 5 years. At this time some secret, possibly of a sexual nature, is imparted to the child which he is forbidden to tell his mother. He determines not to do so, but one day he perhaps asks a question while the forbidden knowledge is present in his mind; a conflict arises, and he stutters and stammers. Often scolded and mocked, he is only made worse. Simple imitation, according to the author, has not much to do with the onset unless a dread or fear complex is already present. The stammerer feels that he is inferior, i.e., he has an inferiority complex in addition to his stammering. As long as conflict exists, it is impossible to cure stammering.

In regard to treatment, the author is inclined to think that persuasion and suggestion, if they cure the stammering, may substitute a more damaging symptom. Stammering being purely a neurosis, drills and breathing exercises are quite unnecessary. The greatest hope lies in psycho-analysis, the bringing up of all the terrifying experiences of childhood into the conscious mind and the making of adjustments to them.

G. W. T. H. Fleming.

# 3. Clinical Psychiatry.

A Common Mental Factor at the Root of Lilliputian Hallucinations: A Synthesis of Three Cases [Un fond mental commun a la base des hallucinations lilliputiennes. Essai de synthèse de trois observations]. (Ann. Méd.-Psychol., February, 1923.) Bouyer and Perret.

Summaries are given of true Lilliputian hallucinations in three cases in the same asylum, and an attempt is made to arrive at a causal factor common to them. Intoxication, exo- or endogenous, at once suggesting itself as a cause of visual hallucinations, is dismissed as unsatisfying. It is pointed out that all these patients are morbidly emotional; their methods of description show a sort of affected delicacy and originality; they are imaginative and tend to confabulate; they are prone to symbolism and mysticism; and there is in each a more or less conscious eroticism.

The theory of Leroy that Lilliputian hallucinations indicate a regression to the diminutive fairy conceptions of childhood is mentioned. As alternatives, the authors suggest that they may be explained by Freudian psychology, or that they may be of the nature of defence reactions.

W. D. Chambers.

A Case of "Insanity of Negation," with Remissions [Une forme à échoses du délire des négations]. (Ann. Méd.-Psychol., February, 1923.) D'Allones, R.

The case of a woman, æt. 44, with heredity to insanity and morbidly emotional youth. Married at 24, she was never pregnant. She

suffered from a variety of ailments, and was markedly hypochondriacal for many years. She became definitely melancholic about 40, and made a number of ineffective suicidal attempts. The melancholia became extreme, with total denial of personality. She asserted she had no body, no organs, no soul; that she did not live and could not die. She was semi-stuporose, with severe impairment of sensibility and suppression of the menses. After sixteen months in this state the patient woke one day entirely normal, with complete recollection of all her illness. A number of alternations now took place at intervals of a few hours, between perfect sanity and the psychotic condition at its worst. Gradually the patient's insight improved, and the psychotic relapses diminished in duration and intensity. After complete suppression for fifteen months in spite of treatment with ovarian extracts, menstruation returned one month before the first remission.

There appears to be a close if not causal connection between the menstrual suppression and the most severe stage of the illness. W. D. Chambers.

An Interlude of Delirium with Symbolic Content, explained on Biological and Physiological Grounds [A propos d'une bouffée délirante à contenu symbolique. Essai d'explication biologique et psychologique d'un délire. (Ann. Méd.-Psychol., October, 1923.) Claude, H., Borel, A., and Robin, G.

A very sudden and severe attack of delirium occurred in a previously healthy young woman, following an abortive love affair, and lasted two and a half months, ending in recovery. The patient showed no physical or toxemic symptoms. She was disoriented, agitated and excited, had aural, visual and gustatory hallucinations, and thought her conduct was influenced by others. Her hallucinations and delirium were mainly sexual, and her conduct was most erotic. On recovery she had almost complete recollection of her attack.

The diagnosis seemed to lie between (I) a simple delirious confusion, (2) the sudden polymorphic delirium which attacks advanced mental cases, and (3) hebephrenia; but in view of the naturally strong sexual feelings of the patient, powerfully stimulated for a year, up to the abrupt end of the love affair, the psychosis appears to be of a compensatory nature—a "flight into illness." (Maeder's teleological conception of illness as an end in itself is not accepted.) Psycho-analysis confirms this view.

W. D. Chambers.

Polyphrenia [La Polyphrénie]. (Ann. Méd.-Psychol., October, 1923.) d'Allonnes, R.

Delusional states are commonly classified into one definite form and a large ill-defined remainder. The former is a pure disorder of interpretation, developing insidiously in a particular subtle type, free from hallucinations, especially verbal, completely systematized, without a trace of psychic dissociation, and without a tendency either to dementia or cure. Hallucinatory psychoses with a predominance of verbal images are grouped by the author as polyphrenia. They differ from the state described above, as follows: They are acquired; their beginning can be dated; hallucinations of every sense but sight, and particularly verbal ones, are constant; dissociation is present. They frequently lead to a state of chronic psychic dislocation, which is not identical with dementia, and rarely to recovery. Polyphrenia is as definite a disease entity as paranoia. Occasionally the two conditions are combined, and it was this combination which Magnan described as "délire chronique."

There are five forms of polyphrenia: (1) Verbal hallucinosis, acute or chronic, without delusional system, but occasionally erratic delusions of persecution, agency, possession, etc. (2) Common verbal hallucinatory delirium, with inactive and unoriginal systematization. (3) Mixed polyphrenia-paranoia, with delusional systems and active interpretation of hallucinations. (4) Polyphrenia-melancholia, with ideas of sin, ruin, suicide, masking the underlying polyphrenia. (5) Delirious polyphrenia, with confusion, dream delirium and visual hallucinations.

Polyphrenia is a partition of the psyche into a residual personality and a number of parasitic personalities more or less clear-cut. There are four steps in this psychic dissociation—simple loss of the sense of private personal individuality, definite "echo of the thoughts," or preferably "theft of the thoughts," autochthonous ideas, and lastly verbal hallucinations. The latter may be auditory, motor, audito-motor or visual, and may be further subdivided into sensory and psychic. The pseudo-dementia of a chronic case of polyphrenia must be distinguished from real dementia.

The conclusions reached above have been supported by G. Ballet in his articles on the chronic hallucinatory psychosis.

W. D. CHAMBERS.

Three Cases of Dementia Præcox replacing Epilepsy [Trois cas de démence précoce survenue chez des épileptiques après disparition de crises convulsives]. (Annales Méd.-Psychol., July, 1923.)
Marchaud, L., and Thomas, G.

Cases: (1) A woman, æt. 39; insane heredity. Minor fits from 1st year, major fits from 10th year; no fits after 16th year, but psychic equivalents for some years thereafter. By the 25th year the picture was entirely one of dementia præcox—enfeeblement, echolalia, stereotypy, etc., and the dementia has been steadily progressive. Wassermann negative.

(2) Woman, æt. 50; insane heredity. Fits began æt. 30, three months after marriage; from the 41st year the fits diminished, and a psychosis, with auditory hallucinations, incoherence and vague ideas of persecution developed. No fits after 47th year, and mental picture now typically præcox. Wassermann negative.

(3) Woman, æt. 38. Chorea in 12th year; married at 22 and had two healthy children; first fit in 24th year and fits continued till 32nd year, when the præcox syndrome developed rapidly. Wassermann negative.

These are not cases of epileptic dementia, of larval epilepsy or of psychic equivalents. A state not distinguishable from dementia præcox has lasted for 19, 9 and 4 years respectively, without any fits, but with, in each case, the occurrence of transitory attacks of violence.

What is the relation between epilepsy and dementia præcox? Is there a pathological link between them? Both conditions develop on degenerated soil, as in the three cases described, and if epilepsy is regarded as a syndrome which may occur in various cerebral diseases, it is obvious that it may precede, follow or accompany dementia præcox. Syphilis can be excluded in the first case, but appears a likely cause in the other two, and if cerebral syphilis can cause epilepsy it may conceivably be a cause of dementia præcox too.

W. D. Chambers.

An Emotional Psychosis [Une psychose passionelle]. (Ann. Méd.-Psychol., February, 1923.) Mignard, M.

An account of the development of a chronic delusional condition with early hallucinations of sight and hearing in a young man. In his youth he occasionally drank to excess, and for many years constantly visited and studied cinema exhibitions of the inferior kind. He developed a system of delusions, regarding himself as the champion of a certain girl and her liberator from (imaginary) persecutors. The ætiology of such psychoses is discussed, and stress laid on the effect of various emotions on the endocrine system and on the personality.

The author described the case as a psychosis "of passion," but in the discussion on his paper it was pointed out that the patient's emotions of love and anger never reached the pitch of passion.

W. D. CHAMBERS.

"Gulliverian" Hallucinations and Dysthyroidism [Hallucinations gulliveriennes et dysthyroïdie]. (Ann. Méd.-Psychol., July, 1923.) Dupouy, R., and Schiff, P.

Two women, both of whom had suffered from exophthalmic goitre, exhibit simultaneously gigantic and lilliputian hallucinations of hypnagogic type. In one case a swarm of giants twenty-five feet high, but very thin, mingle with dwarfs of a few inches. In the other case one single dwarf figure grows gradually to gigantic size. In both cases the pleasurable emotion and the bright colourings described by Leroy as invariably associated with the lilliputian hallucinations are absent. Various theories as to the origin of lilliputian hallucinations are discussed. The word "Gulliverian" is coined to denote the simultaneous appearance of the gigantic and the diminutive.

The hallucinations appear to be due to endogenous toxins, and their transitory nature and lack of strong colouring probably indicate a comparatively slight degree of toxemia.

The authors conclude by a speculation as to whether the writings of Swift, who was a neuropath, may have been inspired by any hallucinations of the kind described.

W. D. CHAMBERS.

Genealogical Studies and Problems Relating to Mental Types (especially Epileptoism [Recherches généalogiques et problèmes touchant aux caractères (en particulier à celui de l'épiptoïdie)]. (Ann. Méd.-Psychol., July, 1923.) Minkowska, Mme. F.

An investigation of the history of two families over seven generations, in the course of which the careers of over 1,000 individuals were studied. It was undertaken at the suggestion of Bleuler, under whose care were a brother and sister, who suffered from an atypical schizophrenia with remissions of a manic-depressive type. It was hoped to prove a convergent heredity of schizoism on one side and syntonism on the other; but it was found that while cases of schizophrenia occurred on the paternal side, on the side of the mother (herself an epileptic) were only cases of epilepsy.

The majority of the members of the father's family exhibited some of the various characteristics which constitute the schizoid type of Bleuler, while running through the other family there recurred certain modes of reaction, both in healthy and epileptic individuals, which the author, again following Bleuler, classifies as "epileptoid." A particular biological constitution specially predisposed to convulsive attacks. It is characterized by a concentrated and immobile affectivity, which lags behind the needs of the subject as regards his environment. It is attached to groups rather than individuals, general rather than particular. Intellectual activity is slow, changes are disliked and traditions are upheld. There is industry, but no initiative, and broad views are impossible. Affectivity tends to become more and more fixed and retardation more marked, so that a state of mental stasis may be reached which can be relieved only by explosive reactions analogous to true epilepsy.

The classification of types is summarized by Bleuler as follows: The schizoid is too detached from his environment, the syntonic just enough, but the epileptoid is not sufficiently detached.

W. D. CHAMBERS.

The Post-encephalitic Mentality of Children. (Journ. de Neur. et de Psychiat. de Belg., No. 5, 1923.) G. Vermeylen.

The post-encephalitic change of mentality in children is the subject of this paper by Vermeylen, who gives details of six cases. The child becomes impulsive, brutal, and subject to uncontrollable outbursts of anger. Diminution of the self-preservation instinct makes him unconcerned with the effects of his actions. He is false and deceitful and given to petty crimes. Sexual precocity together with exhibitionism and masturbation is marked. His powers of attention are poor, and so far as useful work is concerned he is unemployable. Attempts at suicide and self-mutilation are fairly common in these children, but these acts are usually done with a view to impress others.

Only in children are these changes found after an attack of encephalitis, and the author points out the resemblance of these children to the moral imbeciles. In the majority of cases there were some indications of these morbid tendencies before the onset

of the encephalitis which has only aggravated or developed them. In other cases, where the child previously was apparently normal, the question arises whether his final condition is to be regarded as the lighting up of latent tendencies, or as a new psychopathic condition.

MALCOLM BROWN.

- A Visit to Zurich, with Psychiatric Notes [Impressions Psychiatriques d'un Séjour à Zurich]. (Ann. Méd.-Psychol., February, 1923.)
  Minkowski, E.
- (1) The schizoid and syntonic types.—The school of Zurich is the cradle of the concept of schizophrenia. The more intent study of the insane in recent years has led to closer attention being paid to the lesser degrees of mental abnormality. In the attempt to classify these one becomes aware of striking variations between normal individuals, and it appears that the conception of schizophrenia is of great value in the study of the reactions of healthy minds.
- M. Kretschmer, in his book on Character and Bodily Structure. classified the insane into cycloid and schizoid types, and went on to divide temperaments into cyclothymic and schizothymic. attempted to correlate these with the bodily structures and features of individuals. At this stage Bleuler published his ideas on schizoid and syntonic modes of reaction. He prefers "syntonic" to "cycloid," as the latter term stresses the comparatively accidental alternations common in the manic-depressive group. Schizoidism and syntonism are two vital principles which regulate all our attitude to our environment; the former is the faculty of isolating oneself from reality and losing contact with it; the latter the power of getting into touch with the environment and maintaining the unity of the personality. They are normal characters, and normally blended in the individual in varying proportions. When one is in excess the result is an abnormal individual, and when one becomes the seat of a psychosis the disease takes a manic-depressive or schizophrenic turn accordingly.

In the light of this conception the study of heredity will give information of great value, but neither of these characteristics is found as mere units in a personality. Rather they are superposed on the entire combination of units constituting the personality. Examples of syntonic and schizoid reactions to a simple set of circumstances are given.

The conceptions lead on to interesting speculations. The hebephreno-catatonic syndrome may follow general paralysis, braintumour, influenza, etc. Is this due to the effect of the disease on the schizoid portion of the mental make-up, in the same way as an unknown factor intervenes to cause the disease schizophrenia?

Bleuler has further pointed out that any schizophrenic may show syntonic symptoms and vice verså. Research into heredity should throw light on this phenomenon.

It seems probable that schizoidism and syntonism together cover the whole field, but consideration of the epileptic temperament is important. Where a concrete object is presented to an epileptic he appears to forget the links between it and the environment; it attracts all his affective energy and he is unable to detach his attention from it. The same object is viewed by the schizoid vaguely and from a distance, as an abstract without personal relation, whereas the syntonic regards it against the background of his present and future.

(2) A novel method of testing apperception.—Rorschach has studied the faculties of apperception and imagination by presenting to the individual a series of ten more or less complicated blots of ink, some of them parti-coloured. The subject describes what he perceives, or thinks he perceives, in each, or what visual images are aroused. The experiment is simple and gives interesting results, indicating the reaction of the subject to his environment. Rorschach has analysed the results in 400 cases.

(3) Juvenile psychopaths.—A pavilion of twenty-five beds for the care and study of mentally abnormal children has been set up near to and in connection with the asylum. At present children of

both sexes up to the age of 14 are admitted.

(4) Familial care.—An extended attempt is being made to treat recent mental cases in familial care, particularly schizophrenics, before their symptoms become fixed. The step is intended to be curative rather than economic. The number so placed rose from 90 in 1918 to 138 in 1921.

W. D. CHAMBERS.

## 4. Treatment.

The Co-ordination of the Adjunct Therapeutic Measures in the Treatment of Mental Patients. (Arch. Occupat. Therapy, December, 1924.) Burns, G. C. H.

Dr. Burns strongly advocates the co-ordination of occupational therapeutic measures, and urges the appointment of a special physician under whom the co-ordination would proceed. This physician would be known as "The Co-ordinating Medical Aide," and would rank high in the roster of officers. The relationship of the medical aide to the officers of other departments is discussed and also possible overlapping of duties. To him would fall occupational therapy, music and recreation, athletics, education, religious activities and institutional social life.

Dr. Burns thinks that he has "laid out a rather large-sized job—a real man's job—yet one which, it is felt, is the crying need of our hospitals at the present time." Working cards should be the nature of prescriptions. These will outline the daily routine for each, and are completed by the physician under whose care the patient is placed, and he is responsible for the execution of his own order. The medical aide will notify him of vacancies as may occur from time to time, directing him to fill them. He will give the physician all the necessary information as to the nature of the work, class of patients required and the hours of the class.

WM. McWilliam.

The Occupational Aide of the Future. (Occupat. Therapy and Rehabil., August, 1925.) Hall, H. J.

Dr. Hall believes that the occupational aide almost approaches the ideal but thinks it is now a suitable time to examine our standards and to decide what is really wanted in the occupational aide of the future.

At present the aide has no illusions about her work, knows its importance, brings to the bedside of the convalescent patient or to the chronic invalid not only appropriate handiwork to fill the idle hours but a sympathy and understanding—a comradeship which is of more value than work. She has learned to "draw out her patient," to arouse in him the desire for progress and a good hope for future success in life.

After briefly discussing the present system of training aides, he thinks that the worker of the future will be not only an expert craftsworker—she will be able to grade her work with the patients in such a way as to avoid fatigue and discouragement. She will be able to choose the right kind of work for the patient, and she will know when to graduate him to something harder, something requiring of him at the last a degree of effort and stability not far from the demands of his trade or profession when these shall be resumed. She will keep the patient from the cramped and awkward positions so easily assumed in weakness, but which retard by just so much the progress toward recovery. She will have enough knowledge of accounting to keep her books correctly, but more important than all else, she will have a real knowledge of human nature in its reaction to illness and convalescence.

WM. McWilliam.

Occupational Worker and Trained Nurse. (Occupat. Therapy and Rehabil., August, 1925.) Bond, E. D.

The author in this article deals with the new relationship of the teacher of occupational therapy to the nurse, occasioned by the entry of the former into the wards to seek the most difficult patients. In this way the teacher is a part of a ward which must function as a unit, and in the product—the increased welfare of the patient nurse and teacher must expect to see their work merged, inseparable. He urges the occupational therapist to recognize the shortage of nurses and the difficulties it creates, the trying nature of nursing, and the dependence of the teacher on the nurse, who has a special knowledge of each patient. At times the patient may seem unduly limited in privileges, but instead of blaming the nurse it is important to remember that the physician is responsible. The author closes with the hope that occupational teachers, by supporting the conditions in nursing which will attract the highest type of woman, will become not only more efficient and sympathetic themselves, but will influence others to take up the same profession. Through the nurse the field of occupational therapy can be widened. WM. McWilliam.

Habit-training for Mental Patients. (Occupat. Therapy and Rehabil., August, 1925.) Ryon, W. G.

Stating that habit-training results in economic advantages, the author deals particularly with cases of dementia præcox which are so often destructive and untidy. His reservations in choosing his cases are that the patients should not be over 35 years of age; the psychosis should not have existed more than 15 years from the time of onset; patients should be in reasonably good physical health; the history of the patient should show that a fair grade of intelligence was present before the onset of the psychosis; patients with vicious tendencies, also those requiring tube-feeding. Patients who wet and soil are not to be excluded, but those with active delusions and hallucinations of a persecutory nature should be.

Classes should not include more than twenty. Teachers should not be required to stay in charge of habit-training classes for periods longer than 6 to 8 months, as the work is intensive and trying.

The author gives the schedule used at the Hudson River State Hospital, of which he is Medical Superintendent. Class work includes cutting pictures; cutting and folding paper; making scrap-books; limited raffia work; crocheted rugs and filet crochet, wash cloths; spool knitting; tearing carpet rugs, sewing together and rolling; braiding carpet rags for rugs; sewing simple patchwork. Folk dancing, physical exercises and music are also engaged in.

The total number discharged from the training classes has been 44, showing 6 much improved, 11 improved, and 27 unimproved.

WM. McWilliam.

The Psychiatric Approach to Occupational Therapy. (Arch. of Occupat. Therapy, December, 1924.) O'Malley, M.

The author deals with the history of occupational therapy, and the improvement in the patients which results when it is adopted systematically in mental hospitals. She deals particularly with the ideal mental make-up of the medical aide, laying stress on the requisites for working among mental cases, e.g., love, benevolence, kindness, generosity. The regression of many cases to carly ageperiods is recognized—important when it is remembered that only those persons can handle those cases successfully who have the ability to enter into their childish lives, bring out the interests that have been introverted, and direct these interests into usefulness. The great agent in awakening interest is stated to be the transference, at the basis of which is the personality of the aide, whose success is proportionate to her personality containing the important requisites just outlined.

WM. McWilliam.

A Plea for Standardized and Intensive Treatment of the Neurosyphilitic and Paretic. (Amer. Journ. of Psych., October, 1925.) Goldsmith, H.

In the course of his paper Dr. Goldsmith advocates a routine intensive treatment in the case of the neuro-syphilitic and paretic.

and he claims a "decided improvement" rate of 29% among 155 general paretics in various stages of the disease, some moribund. After six series of treatments apparently 6 cases, 5 showed marked

improvement.

Treatment consists in the administration of neo- and sulpharsphenamine, used alternately, as "they tend to stimulate each other to greater spirochætocidal action." Following this the patient, a half hour or so later, is prepared for spinal drainage, and a lumbar puncture is done. Three days later and subsequently to each injection of the neo-arsphenamine he is given I to I gr. of salicylate of mercury intra-muscularly. This treatment is continued for five successive weeks, after which the patient is given a rest of four weeks, during which pot. iodide or sod. iodide is given by mouth. Following the rest period the patient is given five weekly injections of sulph-arsphenamine, without mercurial injections, but with mercury and pot. iodide in solution by mouth.

The treatment is stated to present little danger to the neuro-syphilitic. Removal of the fluid from the spinal canal, then by osmosis and diffusion through the tissues and possibly the choroid plexus, allows new fluid from the salvarsanized blood-stream to take its place, and in this way the central nervous system is subjected to a bath of this medicated fluid.

WM. McWilliam.

Influence of the War on the Relation of Psychopaths to Society [De l'influence de la guerre sur la participation des psychopathes à la vie sociale]. (Ann. Méd.-Psychol., February, 1923.) Courbon, P.

Various factors during and after the war prevented a number of psychopaths being placed under care as in normal times. In the same period, the scarcity of reliable normal individuals for various civil occupations created vacancies which were more or less adequately filled by the psychopath.

On the whole the latter did well. A number of examples are given, including a woman of 35—a paranoid dement of five years' standing—as a domestic, a similar case, æt. 30, as a housekeeper, and a senile dement as a general servant. In no case were the customary wages paid, but the service was reasonably efficient in spite of very marked symptoms, and the employers were generally satisfied.

Such contact between the psychopath and the normal is for the good of both. It must be controlled by an experienced psychiatrist or disasters may result. More could be done in providing useful and profitable employment for ex-asylum patients.

W. D. CHAMBERS.

Epidemic Encephalitis. (Amer. Journ. of Psychiat., April, 1925.) Strecker, E. A., and Willey, G. F.

This paper is a report on the experimental exhibition of acriflavine in fourteen cases showing well-marked sequelæ of epidemic encephalitis, and opens with a brief survey of the voluminous literature and multiple therapeutic agents directed against this

disorder with but little success. The chemistry and chemo-therapy of acriflavine is briefly expounded, and the empirical nature of the treatment in question is frankly acknowledged.

The method of preparation and administration is as follows: A normal saline solution is prepared with chemically pure sodium chloride in water freshly distilled from glass. Heat to boiling and add enough neutral acriflavine to make an 0.5% solution. Mix thoroughly, filter while boiling, sterilize by direct boiling for five minutes and cool to body temperature in a dark place. 10 c.c. of this solution is injected intravenously for eight successive days, an interval of thirty days being allowed to elapse before re-injecting the series. Escape of the fluid into the peri-vascular tissues produces marked inflammatory disturbances.

All the clinical material in this short series was of a chronic type, the period of time intervening between the initial illness and the beginning of treatment averaging three years and four months. There was marked improvement in three instances, improvement in seven, and slight or no improvement in the remaining four. Four of the cases, of which full notes are given, were complicated by pregnancy, and the five children appeared to be normal. The writers urge that this method of treatment should be tried in acute stages of the illness and in recent sequelæ.

A. WILSON.

Aseptic Meningitis in the Treatment of Dementia Præcox. (Amer. Journ. of Psychiat., April, 1925.) Carroll, R. S., Barr, E. S., Barry, R. G., and Matzke, O.

The observation that improvement sometimes occurs in dementia præcox cases during the leucocytosis of infective processes is not new, and various methods of producing a plethora of leucocytes have been tried. Meningeal irritation renders the choroid plexus more permeable, and if dementia præcox symptoms are due to an inefficient choroid—that is to say, a food chemico-deprivation rather than a toxic destructive process—this might account for such improvements. In pursuance of this theory, and in the hope of restoring choroid permeability, Dr. Carroll removed 25 c.c. of cerebro-spinal fluid and replaced it by an equal amount of inactivated horse-serum in a case of marked catatonic stupor. No mental change was observed, but after a second treatment had been given a week later the patient quickly returned to normal for the first time since admission.

This paper is concerned only with the treatment of forty-nine cases at the Philadelphia Hospital for Mental Diseases, but at other hospitals where it has been tried temporary or permanent improvement has been reported in every case. The method adopted at this hospital was as follows: Controls were selected at the time of each treatment, these having cerebro-spinal fluid withdrawn but no serum injected. For the administration of the serum 20 mils of cerebro-spinal fluid was withdrawn, and an equal quantity of normal horse-serum, free from any preservative, was allowed to flow into the spinal canal by gravity. The cerebro-spinal fluid

was at once taken to the laboratory for analysis. Severe febrile reaction usually followed, and certain symptoms were found to indicate danger. A persistent temperature of about 100 precludes further treatment until the temperature is normal. No patient with a fever should receive an injection of serum, and if a marked anaphylactic reaction should be present the patient must be alkalinized and a I in 10,000 adrenalin solution given before treatment is continued. An eosinophilia of over 15% in the spinal fluid contra-indicates further treatment.

A detailed report and discussion of the method and technique employed in the cytological examination of the spinal fluid is given, and it is concluded that the cells themselves present abnormal phenomena very suggestive of a retrograde process, that their form as seen under the microscope is easily distorted by extraneous processes, and therefore the cytology of the spinal fluid in aseptic meningitis requires further careful study.

Of the forty-nine cases so treated, 66% showed improvement lasting from two to eleven months, several enjoying remissions. Many cases gained insight. The writers conclude that a fundamental principle not yet fully determined is involved, the further investigation of which may throw much light on the ætiology of dementia præcox.

A. WILSON.

## 5. Pathology.

The Inorganic Constituents of the Blood of Catatonic Patients. (Amer. Journ. of Psychiat., October, 1925.) Looney, J. M.

This communication deals with a series of investigations of a bio-chemical nature into the cases of 18 rigid catatonic patients. Six of them had previously been examined and their blood had shown an increased creatine content. Decreased coagulability of the blood with increased creatine and the rigidity suggested the analogy of tetany, with the possibility of a decrease in the calcium content of the blood. Of the 18 cases, 15 showed a blood-calcium below the normal of 10 mg. per 100 c.c. "It is interesting to note," writes the author, "that the lowest figures obtained were given by the cases showing the most marked muscular tension," with one exception, "where the tension is that of great mental distress and not merely that of rigidity." He surmised that an increase in the calcium content of the blood of these patients might possibly cause some alteration in the clinical picture. Seven cases were so treated, but no change was noted in their clinical condition. The investigations are to be continued. WM. McWilliam.

The Suprarenal Cortex and Blood-Cholesterol in Dementia Præcox. (Amer. Journ. of Psychiat., October, 1925.) Gibbs, C. E.

The author summarizes his paper by stating that some disturbance of lipoid metabolism may occur in dementia præcox involving the suprarenal cortex, has been suggested by (a) previous observations on the sexual development and behaviour of these

patients; (b) the evidence that the suprarenal cortex is involved in these disturbances of sexual development; (c) the evidence that the suprarenal has both an embryologic and functional relation to the gonads on the one hand and to the brain on the other; (d) substances of lipoid nature play an essential part in the functional metabolism of each of these organs; (e) the female sex hormone and the vitamine for reproduction are both of a lipoid nature; (f) the low basal metabolic rate frequently observed in dementia præcox suggests an involvement of the suprarenal. He reviews the evidence for these considerations and discusses the significance of cholesterol.

He reports on the blood-cholesterol of 38 patients with dementia præcox and on 25 with other psychoses:

Mental state.		Blood-cholesterol.				
16 males (deteriorated) demen				118.3	mg. per	100 c.c.
11 females (deteriorated) demen	ntia p	oræco	x	144.6	,,	,,
5 males (recent acute excitemen	it) de	menti	a			
præcox	,			104.6		11
6 males (no deterioration) deme	ntia p	oræco	x	176.6	,,	,,
Other functional psychoses, n	ot ac	ute,	6			
males				149.2	,,	,,
General paralysis, 13 males .				167.3	,,	,,
Manic-depressives, 6 females .				162.7	"	"

The author believes that the results seem to show that in many patients with dementia præcox the blood-cholesterol is unusually low, and that it may be more directly correlated with the psychosis and with sex than with any other recognized factors.

WM. McWilliam.

A New Diagnostic Symptom for the Recognition of Idiopathic Epilepsy in the Interparoxysmal Period, with an Experimental Study of the Pathology and Eugenic Importance of the New Symptom. (Journ. of Nerv. and Ment. Dis., October, 1925.) Focher, L.

The author, using the Spearman esthesiometer, found an asymmetry of Weber's tactile sensibility in from 25-30% of idiopathic epileptics. He used the volar surface of the top phalanx of the index finger first of the right hand, then of the left hand. The distances used were in order: I-4-3-2-3-I-4-2-2-I-I-3-4-2-3-4 mm. The absolute asymmetry is judged by the differences in the numbers obtained on the left and right hands, allowing for the presence of contradictions.

G. W. T. H. Fleming.

The Cerebro-spinal Fluid in General Systemic and Metabolic Diseases, as in Nephritis, Diabetes, etc. (Journ. of Nerv. and Ment. Dis., September, 1925.) Alpers, B. J.

In diabetes, 19 cases of his own reports and 46 from the literature were studied. In all the former the fluid was clear, of normal pressure, but in 40% the cell-count was increased. Most of the cases with increased cell-counts had complications, such as gangrene, tuberculosis or pneumonia. The protein content

showed a slight increase in 45%. The sugar was increased in amounts varying from 0'3 to 3%, the amount of the increase being proportional to the severity of the disease and probably also to the level of the blood-sugar. Acetone occurs, according to some authors only in coma, but it would appear to be present before the coma, and acts as a warning sign. Diacetic acid is reported, but only in the severest cases of coma.

Forty-one fluids from cases of chronic nephritis without uræmia showed clear and colourless fluids in all cases. Most were nephritis with hypertension. In 83% the cell-count was normal, and in 17% it was increased. Pressure readings, when taken, were increased. In 30% a slight increase in protein was recorded. In cases of chronic nephritis with ædema an increase in chlorides has been reported, and one author reports uric acid and creatinin in the ventricular fluids in a case of chronic nephritis. In uræmia the fluid changes are different. From the study of 98 cases collected from the literature the pressure is always elevated, and by some authors an increase in sugar has been reported and the urea is always increased. In cases of secondary uræmia the amount and pressure is always increased, the cells are usually normal, but may be increased, the chlorides are increased, the albumen content is qualitatively normal and the urea content is elevated.

In jaundice the fluid is occasionally yellow, probably in 15-20% of cases. A decrease in chlorides has been reported, and a few cases with an increased sugar content. Fluids from cases of gastroenteritis, chronic endocarditis, chronic myocarditis and subacute bacterial endocarditis were all normal. In gout, urates and uric acid crystals have been reported. In 21 cases of pneumonia without signs of a meningismus, an increase in the cell-count was noted in 13%. In 18 cases of broncho-pneumonia the cells were increased in 33%. Twenty-five cases of pneumonia with signs of meningismus showed normal fluids. In typhoid fever a hyper-glycorrhachia has been reported, and also a decrease in chlorides.

In pulmonary tuberculosis 50% showed an increased cell-count.
G. W. T. H. Fleming.

Comments on the Pathology of Dementia Præcox. (Journ. of Nerv. and Ment. Dis., September, 1925.) Lewis, N. D. C.

After discussing the difficulty of presenting an accurate and reasonable conception of dementia præcox, Lewis proceeds to consider the reaction of dementia præcox as a heredo-degeneration allied to the hereditary ataxias, muscular dystrophies and choreas. In an article in 1923, Lewis considered the true dementia præcox constitution to be a heredo-degeneration, whose localization is not in the higher neurogenic levels, but in the circulatory and endocrine systems.

After briefly summarizing the brain researches up to 1919, Lewis considers in detail the most recent findings. Hayes in 1924 considered that dementia præcox is a deficiency disease of the endocrine glands, and that the brain changes are secondary to those of the endocrine organs. Mott, in 1921, considered that the disease

is the result of an inborn germinal deficiency of productive energy of the reproductive organ associated with a progressive deterioration of psycho-physical energy. In 1922 Mott and Such summed up the previous work on the testicle. There are two large groups of changes in the testes—those involving the tubules and those involving the interstitial cells. The alterations in the tubules are characterized by three stages of regressive atrophy. The alterations in the interstitial cells consisted in a pigmented deposit, which is not seen in normal conditions except in old age. In 1923 Mott and Hutton described changes in the adrenals as follows: In the medulla an increased number of nuclei, irregularity of their size and form, and deficiency of chromatin, an increase in fibrous tissue and an increase of fibroblastic nuclei. There was little or no change in the cortex.

Lewis, in 1923, in his book based on 5,000 autopsies found that in true dementia præcox the circulatory system had not only been arrested in development, but lacked the ability to react by a satisfactory compensatory hypertrophy when occasion demanded, and often remained below the average size after developing valvular insufficiencies. The small heart and vessels are not due to atrophy or general malnutrition. From a chemical point of view Uyematsu and Soda analysed the blood and found in 75% a decrease in uric acid. Raphael in 1923 concluded that in dementia præcox there is a definite hypo-oxidative state with general metabolic depression. Dawson found a high proportion with disorders of the vegetative system. Slovtzov, in 1923, isolated 30 different enzymes from normal untreated grey matter desiccated in a current of air.

In regard to treatment, there is a many-sided problem to discuss. There has to be physical therapy, postural therapy, occupational therapy and psycho-therapy. Walker applied the diathermic current; Josephy injected autoserum; Templeton tried malaria, as in the treatment of general paralysis; Bleuler tried prolonged somnifene hypnosis; Carroll tried aseptic meningitis.

G. W. T. H. FLEMING.

Experimental Investigations Concerning the Double Effect of Calcium on the Vegetative Nervous System. (Journ. of Nerv. and Ment. Dis., September, 1925.) Barath, E.

According to Kraus and Zondek, an increase in the calcium ions in the liquid surrounding cells is analogous to alteration of the sympathetic, an increase of potassium ions to that of the vagus. Barath injected intravenously 5 c.c. of a 10% solution of calcium chloride, and noted the following results: Slowing of the pulse-rate by 15-35 beats per second to 45-50. The Aschner oculo-cardiac test becomes decidedly positive. There is a slight increase in blood-pressure and an initial decrease in blood-sugar. The previous injection of atropine prevents the slowing of the pulse, thus showing it to be due to vagus action. The effect of calcium chloride is really a double one—an initial period of vagus excitement of short duration, and then a period of less strongly expressed sympathetic excitement of longer duration.

G. W. T. H. Fleming.

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Cerebro-spinal-Fluid Pressure from the Clinical Point of View. (Arch. of Neur. and Psychiat., October, 1925.) Ayer, J. B.

The author places the normal pressure at anything between 100-200 mm. of water for the patient lying down on the side with the axis of the spine horizontal and the head in alignment. The pressures in the cisterna and ventricle are the same as the lumbar region in this position. In the sitting position lumbar pressure is approximately doubled, while the cisterna and ventricular pressures are negative. Queckenstadt's sign of increased pressure on compressing the jugular veins is useful in showing the blocking of the spinal subarachnoid space when the pressure fails to rise.

Pathological conditions causing the highest pressures, even up to 1,000 mm. of water, are acute meningitis, brain tumour, hydrocephalus and hæmorrhage, both cerebral and meningeal. Among the diseases, seldom rising above 500 mm., are tuberculous meningitis, aseptic meningitis, uræmia, polycythæmia, cerebral thrombosis and brain abscess. In fainting and in shock the pressure is frequently low, as in patients with long-standing degenerative diseases of the central nervous system.

Clinically the administration of hypertonic saline has been followed by a drop in pressure in cases of brain tumours, meningitis, cerebral hæmorrhage, general paralysis, epilepsy and other diseases. Conversely, the administration of distilled water intra-venously has raised the pressure in shock or hypotension headache. Repeated pressure readings after withdrawal of known amounts of fluid yield information as to the amount of fluid in the ventriculo-subarachnoid system. After withdrawal of 5 c.c. there is usually a fall in pressure of 30 mm., and after the withdrawal of another 5 c.c. a further fall of 20 mm. If there is only a fall of 10-20 mm. after the withdrawal of 10 c.c. it is suggestive of a large reservoir of fluid as in hydrocephalus or serous meningitis. An excessive fall indicates a small reservoir. Ayala's index is—

Quantity taken × final pressure

Initial pressure.

Rachidian quotient.

Balduzzi, using this index, found that a quotient of less than 5 speaks for brain tumour and one over 7 indicates serous meningitis.

The Queckenstedt sign is of use in the diagnosis of lateral sinus thrombosis. In complete sinus thrombosis the lumbar pressure is unaffected by jugular compression on the side of the affected sinus, or rises only a little. Jugular compression on the unaffected side produces an excessive rise, commensurate with the normal reaction when both jugular veins are compressed synchronously.

G. W. T. H. FLEMING.

Cerebro-spinal-Fluid Chlorides. (Arch. of Neur. and Psychiat., October, 1925.) Fremont-Smith, F., and Dailey, M. E.

The cerebro-spinal chlorides are normally 720-750 mg. per 100 c.c. expressed as sodium chloride. The chloride content of lumbar, cisterna and ventricular fluids is the same in normal fasting subjects.

The distribution of chlorides in the fluid and plasma varies conversely with their protein content, i.e., an increase of protein in the plasma is accompanied by an increase of chlorides in the fluid and vice-versa. Chlorides below 600 mg. are uncommon except in tubercular meningitis. Values between 630-680 mg. are commonly found in acute purulent meningitis. A low or falling spinal fluid sugar (provided the blood-sugar is not below normal), together with a very low chloride value and a moderate increase of cells (up to 400-500), is characteristic of tubercular meningitis, and, according to the authors, of no other condition. In acute purulent meningitis the sugar content drops rapidly to below 20 mg. per 100 c.c. within the first 24-48 hours, while in tubercular meningitis the sugar content, which may be normal at first, falls slowly. A normal or elevated sugar content at intervals of two or more days with normal or slightly diminished chlorides precludes tubercular meningitis or acute purulent meningitis. In epidemic encephalitis, anterior poliomyelitis, brain abscess or tumour, the sugar is always either normal or somewhat increased, and the chlorides normal except in anterior poliomyelitis, where they may be moderately diminished to 670-710 mg. Acute purulent syphilitic meningitis is distinguished by the presence of the positive G. W. T. H. FLEMING. Wassermann.

Cerebro-spinal-Fluid Sugar. (Arch. of Neur. and Psychiat., September, 1925.) Fremont-Smith, F., and Dailey, M. E.

The authors emphasize the fact that all the reducing substance in the cerebro-spinal fluid is not glucose. They used Folin and Wu's latest method of determination and found that after hydrolysis I-15% was not glucose. The ventricular fluid invariably contains more glucose than the lumbar fluid. The fluid sugar runs nearly parallel with the blood-sugar. The normal fluid sugar values vary from 50-134 mgm. according to Schloss and Schroeder in 1916, but according to Mestrezat in 1924 between 55-65 mgm. When fluids have high sugar values it is advisable to examine the blood-sugar, as in many cases the high sugar is due more to a hyperglycæmia and not necessarily to nervous system changes. In sugar tolerance tests the hyperglycæmia produced is reflected in the lumbar fluid after a latent period, by which time the blood-sugar may have fallen to a level below that of the lumbar fluid. Spinal sugar values below 50 mgm. nearly always indicate an acute infection of the meninges. Spinal fluid sugar should be determined on fasting patients and compared with coincident blood-sugar. G. W. T. H. FLEMING.

Comparison of Gold Chloride, Benzoin and Mastic Tests in the Cerebro-spinal Fluid. (Arch. of Neur. and Psychiat., October, 1925.) Cockrill, J. R.

Four hundred colloidal-gold, benzoin and mastic tests showed 16 dissimilar reactions and 384 similar reactions in all three tests. The benzoin and mastic tests are of approximately equal value. The technique of the former is simpler, so it is the test of choice.

In special cases, such as meningitis or multiple sclerosis, requiring the original benzoin test of sixteen tubes, the colloidal gold test is preferable.

G. W. T. H. Fleming.

The Cerebro-spinal-Fluid from Different Loci. (Arch. of Neur. and Psychiat., September, 1925.) Ayer, J. B., and Solomon, H. C.

These authors found, on comparing normal fluid from the lumbar region, from the cisterna magna and from the ventricle, that the pressure, colour, negative Wassermann, colloidal gold, mastic and benzoin reactions are similar. Cells are present in the lumbar and cisterna fluids, but absent in the ventricular fluid. Globulin is normally absent in all three loci, but the total protein as indicated by trichloracetic acid and sulphosalicylic acid varies slightly, being highest in the lumbar fluid and lowest in the ventricular fluid, the figures being roughly 30, 25, 10. In marked contrast is the sugar content, which is greatest in the ventricular fluid ('08%) and least in the lumbar fluid ('06%), the cisternal fluid being midway between.

In general paralysis the cisternal and lumbar fluids are very much the same, but the ventricular fluid often differs to a considerable extent. In some cases where the cisternal and lumbar fluids give a typical paretic reaction the ventricular fluid may be normal. The lumbar fluid is always stronger in its reactions than the ventricular fluid. In meningo-vascular syphilis of spinal type, if there is no spinal block the cisternal and lumbar fluids are alike. In the brain, subtentorial tumours are accompanied by a high protein content solely in the subarachnoid space. In tumours of the cortex, there is a slight increase in the protein of the sub-Tumours in the vicinity of the ventricles cause arachnoid fluid. an increase in the protein of the ventricular fluid, as in the lumbar In acute meningitis, as the disease progresses, it becomes increasingly difficult to obtain fluid by lumbar puncture. If the cisternal fluid be examined it shows a cloudiness with, however, fewer cells than the lumbar fluid, also less protein, but a larger number of living organisms. The ventricular fluid at the same time shows an enormous number of organisms, but few cells. Still later in the infection it becomes almost impossible to obtain fluid by lumbar puncture except a few drops containing pus. The ventricle Recent workers consider that acute contains living bacteria. meningitis begins as a ventriculitis, hence the importance of early ventricular puncture and the introduction of curative sera. It is in spinal subarachnoid block that comparative punctures yield most information. The fluid below the block always contains much more protein than that above, and diminishes progressively upwards, although the cisternal fluid always contains an excess.

G. W. T. H. FLEMING.

Is Encephalitis an Infectious, Epidemic Disease? (Arch. of Neur. and Psychiat., November, 1925.) Salzman, S. R.

The author, after describing ten cases of gall-bladder disease with encephalitis, comes to the conclusion that the latter is due to

an infection of the gall-bladder and biliary tract with subsequent toxic action on the brain. He points out how incomplete are the records of autopsies in encephalitis. In Wilson's disease there are changes in the basal ganglia not unlike those of postencephalitic Parkinsonism associated invariably with cirrhosis of the liver. In chloroform and phosphorus poisoning and in acute yellow atrophy, there is injury to the liver accompanied by marked disturbance in brain function. The infection in the gall-bladder is of a low grade, and the toxin which does the damage to the brain unknown. He points out, in conclusion, that the frequency of gall-bladder disease in young adults is becoming more and more realized.

G. W. T. H. Fleming.

Closed Foramina of Luschka in the Brains of the Insane. (Arch. of Neur. and Psychiat., November, 1925.) Bateman, J. Fremont.

Bateman examined 901 brains (666 insane patients, 150 epileptics, and 85 normals), and found in 77 cases closure of the foramen of Luschka, in 10 of which the closure was bilateral. In the brains of the insane patients the percentage was 11.6, in the epileptics 5.3, and in the normals 2.5 (the "normals" were from the dissecting room, hence the high percentage). These closures were imperforated lateral expansions of the posterior medullary velum. The choroid plexus and ependymal lining of the ventricles showed hyperplastic changes in 54 of the 77 brains with closed foramina. There was a marked unilateral deterioration of nervous substance due, probably, to inadequate circulation with stagnation of the fluid and an accumulation of waste products.

G. W. T. H. FLEMING.

## 6. Sociology.

The Problem of Social Adjustment following Epidemic Encephalitis in Children. (Mental Hygiene, October, 1924.) Cole, B. E.

The author's ten cases showed behaviour difficulties after an attack of epidemic encephalitis. The report is concerned primarily with the peculiar mal-adjustment of these children in their various social relationships and the consequent difficulties encountered in attempting to adjust them. They readily lose their temper, are restless and impatient, and may burst into tears on the slightest provocation. They have periods of extreme irritability, in which they are disobedient or nag and complain. They forget errands, may spit at persons or objects, swear, stamp their feet, and laugh foolishly. They may steal, play truant or take part in a number of delinquent acts. They are dominating and unreasonable, and are teased or shunned by other children. They are equally intractable at home. Because of this behaviour they are cajoled, bribed, scolded, threatened, whipped, expelled from school, and sent to truant schools and to institutions for delinquents, for the insane, and for the feeble-minded. Patients invariably state as regards their misbehaviour that they "can't help it." There are no facilities, the

auhor states, for the adequate treatment of these cases, and so it is the patient's family who are left with the problem. Parents are relieved in a measure by the knowledge that the condition is due to disease and that they are not morally obliged to administer what they consider proper punishment. Undoubtedly punishment only increases the patient's excitability and make him still more of a problem. On the other hand, it is well to insist upon a fairly strict régime, since too much laxity leads the patient to make "invalid" demands and evasions. It has been found that by kindly urging and by supplying a strong incentive for doing a thing, better results are obtained than in any other way. the problem is to protect the patient from his environment and the environment from the patient, and ideally the solution is to send him to a special institution. WM. MCWILLIAM.

Homicide in Massachusetts. (Amer. Journ. of Psychiat., April, 1925.) Stearns, A. W.

The statistics and case-records quoted in this article are inadequate to warrant far-reaching conclusions of sociological or psychological import, but they do indicate the type of man who commits murder, his racial characters, mental make-up and influences of environment which tend to explain his profound anti-social behaviour. It would appear that Massachusetts has a rather low homicidal rate for the United States, but a high rate compared with European countries. Though a definite increase in this crime is shown for the ten years prior to the war, subsequent figures show no substantial increase for the last forty years, and the steadily increasing murder rate up to 1916 corresponds to the increase in immigration during the same period.

A very high percentage of homicidal persons were foreign born. The matter seems to be cultural rather than racial, as it is the illiterate and unskilled, among the recent immigrants who tend to commit acts of violence regardless of their race. Alcohol appears as a prominent factor in causation, 20% being drunk at the time of committing the crime. In respect of age, homicide is most frequent in early middle life. Marriage, while having a stabilizing effect on crime in general, appears to increase the hazard as far as murder is concerned. The lack of education is marked, 25% in one series of cases being unable to read or write.

Contrary to popular belief, murder does not seem to be the culmination of a career of crime, a previous arrest, if any, was usually for some minor offence. The question of motive is often complicated, but at the time of the act abnormal emotional states and elements of confusion are nearly always present, and fear is more common than rage. Cases where friends or associates have been killed in unpremeditated quarrels are relatively very high.

Mental disease or personality disorders sufficiently gross in character to limit responsibility were present in about 20%, most of the cases afflicted in this way being foreign born. The writer comments upon the difficulty of determining responsibility before trial, and judging from the character of those cases which came

under his observation, "it would seem much wiser in attempting to protect society, to look upon limited responsibility as an aggravating, rather than a mitigating circumstance."

A. WILSON.

A Proposal for an Investigation into the Drug Peril in Belgium. (Fourn. de Neur. et de Psychiat. de Belg., No. 1, 1923.) Vervaeck.

The author views with alarm the increased numbers of drug addicts which have arisen since the war. Reviewing the conditions existing in several countries, particularly America, he gives some rather startling figures. For instance, he says from 4 to 5 million people (4% of the population) of the United States are addicted to derivatives of opium. In Belgium so far there has been no marked increase of the evil, but the existence of an illicit trade in drugs across the German border is disquieting. The author suggests as a remedy the collaboration of the medical profession and the civil authorities, and preparation of a questionnaire to find out the true extent of the evil.

MALCOLM BROWN.

Criticism of a Bill for the Dissolution of Marriage in the Case of Insanity in one Spouse. (Journ. de Neur. et de Psychiat. de Belg., No. 3, 1924.) R. Ley.

The author criticizes a measure put before the Belgian Chamber in 1923 by M. Emile Jennissen, concerning the question of dissolution of marriage in cases where one spouse has become incurably insane. The qualifications for the dissolution were to be that one spouse is suffering from an incurable disease of the mind, and has been confined in a mental hospital for three consecutive years, and that the other spouse applies for dissolution of the marriage. The procedure would be that on the application of the other spouse, the superintendent would grant a certificate that the person concerned had been a patient in his institution for three consecutive years and was apparently incurable. Then, on the report of a mental expert, a tribunal, subject to confirmation by the Minister of State, would grant a dissolution to take effect six months after the date of the application.

The author suggests that the Bill is ill-timed and that its promoter has been ill-advised. He suggests that before such a measure is put before the Chamber the opinion of La Société de Médecine Mentale be obtained. In the present Bill there is no consideration of the rights of the insane person; a term of three years' confinement is manifestly insufficient, and the responsibility of saying that a patient is then incurable is too great. He suggests that a full investigation into the signs of incurability and the question of tardy recovery be initiated.

MALCOLM BROWN.

## 7. Mental Hospital Reports.

Glengall Hospital, Ayr.—At the close of the year 1925 there were 579 patients resident—a decrease of 22 as compared with 1924. One hundred and forty-five patients were admitted, 81 were discharged, and 86 died.

The recovery-rate was 31% for the men and 57% for the women. 41% of the nurses and 33% of the attendants have the R.M.P.A. nursing certificate.

Dr. McRae considers that general paralysis is as prevalent as ever, "in spite of scientific safeguards permitting of unlimited indulgence," and remarks, "Surely a better method of dealing with this social evil than by inoculating the hapless victim with another microbic infection (malaria) would be for the community generally to adopt a proper standard of sexual continence—which, unfortunately, however, on account of the prevailing modern doctrine of contraception, misnamed birth-control, seems further off than ever."

And he again "calls a spade a spade" when, in speaking of the "widespread failure to recognize the serious import of symptoms in cases of mental illness," he states: "There would be far more suicides in mental hospitals were it not for the fact that the vast majority of such cases are never sent now to these institutions. Instead, cases are misnamed 'nervous breakdowns,' and are permitted to end fatally in due course."

Morningside Royal.—During the year 1925, 207 patients were admitted to the two departments of the institution—Craig House and West House—and the number of patients discharged during the year was 132, counting recovered and unrecovered, the figures not being shown separately. It has always been difficult for most of us to see any reason why the financial position of a person should govern his ability to be treated as a voluntary patient, and any basis upon which the decision was made has, for many years, been known to be unsound; it is therefore satisfactory to hear that this limitation has, for ever, "been cancelled in Scotland" by Section 59 of the Act of 1913, and Prof. Robertson speaks of the results, in his experience, as an unqualified success, and we all agree with him that much more remains to be done to modify the present procedure as to admission of patients to mental hospitals, since it can be shown that the cunningly contrived legal modes of protection of the liberty of the subject are at variance with his well-being

The nursing homes in the suburbs of Edinburgh (each adapted to a certain type of case) have been in full occupation during the year and have been a boon to the public and the profession, and in addition to these a convalescent home is to be established in the country.

A real advance in the relationship of mental to general medicine is recorded in the appointment of Prof. Robertson as Physician-Consultant in Psychiatry at the Royal Infirmary, and the establishment of an out-patient clinique to be conducted by him with the help of two assistants. In this connection Prof. Robertson calls to mind the interesting fact that this great hospital did, when first opened, provide accommodation for mental patients.

In order to meet the demand, which undoubtedly exists everywhere, for suitable hospitals "for the treatment of early and mild forms of mental trouble among patients of the classes who for bodily ailments seek admission to general hospitals," the Managers of the Royal Hospital at Morningside are providing a hospital to be called the Jordan Burn Hospital in the neighbourhood of West House.

"This hospital would not be a mental hospital or an asylum, but would actually be a hospital for a special form of disease, comparable to the great hospitals into which all patients enter voluntarily and without any legal formality or stigma, exactly as they do when entering the wards of the Royal Infirmary. It might with advantage be run in association with the Out-Patient Clinique at the Royal Infirmary."

The whole report breathes the progressive spirit for which this hospital is justly famous, having one ideal always in the forefront, namely, the welfare of the mentally afflicted, to which everything else is subsidiary and ancillary.

Prof. Robertson has also some interesting things to say in his short retrospect:

"Time has also vindicated the physician of the mind. Because he could not demonstrate the basis of a delusion to the naked eye or under a microscope, as the surgeon and the physician of bodily diseases deal with the disorders they treat, he was regarded as having failed in scientific research. This failure was held up as a reproach to mental physicians. These views were quite wrong, because we now know that most disorders of the mind can be best explained on a psychological and not on an anatomical basis. Similarly, because the physician of the mind did not pin his faith to drugs and other materialistic agents alone, it was implied that he did little to assist in the recovery of his patients. But mental suggestion and the innumerable methods of psychotherapy have lately burst like a new revelation on the profession in general and on the public, and these have been regularly and most successfully applied by mental physicians for very many years.

"It is customary to speak of the handicap the science of the mind has laboured under owing to the separation of the work of the mental physician from that of the general physician. There can be no doubt of the truth of this, and the treatment of patients suffering from mental ailments is certain to benefit by the approach to one another of these two groups of physicians. But the benefit to be derived from this co-operation, which we see developing at the present time, is not one-sided; it is reciprocal. Indeed, the main benefit is received by the general physician. He has for the first time, partly owing to the experience gained in the war, come to recognize the predominant part played by the mind in the production of many symptoms, and the value of its assistance in their removal."

London County Council.—The eighth annual report indicates that the expenditure on mental hospitals has increased from £660,506 in 1916, to £1,468,820 in 1925, and the total accommodation

provided is for 19,258 (excluding Claybury Hall)—an increase on the previous year due largely to the opening of West Park Mental Hospital. Although the number of patients resident is less than this figure, there is still a great deal of overcrowding at Bexley, Claybury, Colney Hatch and Hanwell, owing to the fact that a large number of beds at West Park were not immediately available owing to temporary reconstruction at other institutions. As a result of the opening of West Park a considerable number of contracts with various counties were able to be terminated, and in March there were only 385 patients boarded out under contract. An interesting table is shown indicating that the number of mental patients for whom the Council has the responsibility of providing accommodation has been a steadily diminishing figure for some years, also that there has been a considerable decrease in the number of patients in institutions of the Metropolitan Asylums Board, in workhouses, and under care of relatives and friends.

The percentage of recoveries (on the direct admissions) for the nine mental hospitals belonging to the county was 29.4, and of deaths 6.4.

The alien patients in residence at the end of the year 1924 were 610 in number, a large proportion being Russian Jews and Russians, but owing to post-war difficulties repatriation is only carried out with difficulty.

In 1923 a trained masseuse was appointed at Claybury Mental Hospital, and it is pointed out that, so successful has been the experiment, that arrangements have been made for the employment of a masseuse at each of the other hospitals for an experimental period of six months.

The importance and value, not only to the patient, but also to the community, of properly organized after-care is fully recognized by the Mental Hospitals Committees and the Medical Superintendents, as is shown by the fact that during the year the Mental After-Care Association actually dealt with as many as 485 cases of convalescence and recovery; of these it found employment for 184, and placed 160 in cottage homes for a period. This, together with the other work of this body, forms a record of which any voluntary association may be proud.

The contributions to medical literature made by members of the medical staff of the London County Mental Hospitals are of a high standard, and reach the medical public through the medium of the various medical papers.

Metropolitan Asylums Board.—Of the large and interesting volume dealing with the many activities which occupy the attention of this Board, it is only necessary here to consider that part which appertains to the mental defective class, and in this is included all cases "from the highest grade of improvable patient in a training colony, to the senile dements, and the lowest grade of imbecile child." Provision is also made by this body for sane epileptics at Edmonton.

The total accommodation provided by the Board for mental

cases is at present 9,748, but by means of alterations at Tooting Bec Hospitals this figure will be shortly increased.

Amongst many interesting points in the report it is noted that the Board have established and equipped a laboratory at Fountain in order to use more fully the very varied and valuable material there for the elucidation of the problems of mental defect.

Several papers by members of the medical staff are published in this volume which are worthy of a wider public, and amongst them an interesting review of the present practice in mental deficiency in Belgium by Dr. Sherlock, and an article by Dr. Nicoll on the stigmata of degeneration. All, however, are of a high standard and represent good sound work, of which the Metropolitan Asylums Board may justly be proud.

Derby Borough.—At the end of the year 414 patients were in residence—or one more than at the beginning of the year—and in this number are 29 private patients, and 19 service and ex-service patients. There were admitted during the year a total of 79 cases, and in these heredity was found to be an ætiological factor in 41%, and 28% had had attacks previously of mental disease; alcohol was considered to be the principal cause in 3 cases. Twelve cases recovered during the year, and of the 53 remaining under treatment a good prognosis is given in 18. The recovery-rate for the year was 36.9. Dr. Bain speaks hopefully of the nursing service in his institution, it is pleasing to note, and apparently with good cause, seeing the large proportion of the nurses who are fully qualified with the Certificate of the Royal Medico-Psychological Association, and still more so since he is able to report as follows:

"But even more satisfactory is the fact that there has been a steady improvement in the duration of service of the junior nurses, with a consequently increasing proportion of probationers within reach of obtaining the certificate; so that I hope that in the course of the year we shall approximate closely to the figures given in the Report of the Departmental Committee as the desideratum for a training school in an Institution of this size. The General Nursing Council have approved the hospital as a Training School for their examinations. Progress in the future depends, however, on the accommodation and equipment that can be provided in a nurses' home to which you have given your approval, and more requires to be done for the recreation of the nurses if the best type is to be secured.

"The Study Room provided for the Male Nurses fulfils a useful purpose, and the Kitchen and Laundry Staff have now a Recreation Room which is much appreciated. The first of the Hard Tennis Courts has been completed and is ready for play. It is hoped to have others ready during the summer."

Hampshire: (1) Knowle.—The total accommodation at Knowle Mental Hospital is for 1,120 patients, and at the end of the year, March 31, 1925, there were 983 patients in residence, the average

number resident during the year being 1,005. The net admissions for the year were 104, and the recovery-rate 45.2%, which, it is explained by Dr. Jackson, is due to the fact that owing to the Southampton cases going to Park Prewett now, the Knowle admission-rate has fallen; hence the relatively high recovery-rate. The death-rate for the year was 8.3%, the largest single cause of death being tuberculosis, 15.1 per 1,000 population, as compared with the average of 8.6 per 1,000 for all mental hospitals; one case occurred of rupture of the heart in a female patient. Cases of colitis have been very few during the year, and of this Dr. Jackson says:

"As compared with previous years, the fall in the last two

year is most marked.

"The average for the five years, 1918-1922, was 74.

"I am still of the opinion expressed last year that the improvement in diet and the appointment of a dental surgeon have

been large contributory causes."

The laboratory under Dr. Wilson has done a great deal of valuable work during the year, not only in making a large number of routine examinations, but also in carrying out a special investigation in connection with a small outbreak of enteric fever which resulted in a limitation of that disease.

(2) Park Prewett.—The total accommodation at Park Prewett is for 1,400 patients, and at the end of the year there were 1,116 patients in residence. The admissions for the year were 337, of which 268 were direct admissions, and the recovery-rate calculated on these was 23.5. The death-rate for the year was 6.9%, and the chief causes of death were senile decay, heart disease and general paralysis of the insane.

An automatic, electrically controlled continuous bath has been

installed, and Dr. Bowes records its value in treatment.

A good proportion of nurses are becoming qualified with the Association Certificate, but there is much difficulty in getting and retaining a good type, possibly owing to want of suitable accommodation, which is under consideration. A lady gardener has been appointed who has under her care female patients.

#### THE LUNATIC ASYLUMS OF BURMAH.

This great Buddhist province, some three or four times as large as England, with a population of about 13,000,000 persons, has at present two asylums, one at Rangoon (under Major Robson), and the other at Minbu (under Dr. Krishnaswamy), some three hundred miles north; but inasmuch as the Rangoon Asylum is continually overcrowded, a new asylum is shortly to be opened at Kokine, and in this connection it is to be remembered that practically 40% of the total population of Burmah is situated in the South Central Region.

The total population of the two existing asylums is 1,150; the admissions for the year 1924 were entirely to the Rangoon Asylum, and were 204 (M. 167, F. 37). The ætiology of mental disease amongst the admissions calls for no comment with the exception

that nearly 12% of the male cases were attributed to the abuse of alcohol, 2·3 to opium and morphia, and 6·5 to cannabis indica and its derivatives.

The record of employment of patients in gardening, paddy grinding, weaving, cane-work, etc., is a good one, as many as 82% being so employed at Minbu, and small monthly payments, according to merit, are given to patients for work done. Amusements are well supplied by the performance of pwes once a month, musical and gramophone entertainments, sports, and weekly musical recitals by a military band. The difference of administration incident to a geographical position some degrees east, is shown by such points as that the persons who look after the insane are universally called "keepers" (some patients are employed in sick attendance), and that "the walls are guarded by sentries at important points."

### LEBANON HOSPITAL FOR MENTAL DISEASES AT ASPURIYEH, SYRIA.

It is difficult for anyone not conversant with the early history of the insane in Syria to fully realize the enormous importance of the work initiated in 1895 by that large-hearted missionary, Theophilus Waldmeier, which culminated in the establishment of this international hospital near Beirut. Prior to this, the state of the mentally afflicted was pitiable. According to the theory of the churches of the land, all lunatics were supposed to be the subjects of demoniacal possession, and were taken by the monks or priests to be exorcised, this process consisting of chaining to the rocks of certain caves, notoriously one at Kuzheya, in North Lebanon, branding with a cross on the occiput, beating, starving and otherwise maltreating in order to expel the supposed demon. During the process it is not to be wondered at that many died.

Owing to the self-sacrificing efforts of Th. Waldmeier, who appealed to the humanitarians of all civilized countries, committees were set up in Switzerland, Germany, Holland, the United States, Canada, Scotland and Ireland, with a central committee in London, and the present mental hospital was established, Sir Richard Tangye being the first Treasurer, and Dr. Percy Smith the first Chairman.

The report is for the year 1924-25, and shows 95 patients on the register at the end of the year; 141 were admitted during the year (M. 96, F. 45), with the admission-rate at its highest during the months June to September. The forms of mental disease most prevalent were one or other of the forms of dementia præcox and manic-depressive insanity, and as to causation, syphilis, alcohol and morphine occur as ætiological factors, only, however, in a small proportion of cases, and having in mind the conditions, it says much for Dr. Watson Smith's energy that so few cases have no assignable cause with such a large turnover of patients during the year. In order to visualize the position that this hospital holds in the world of mental hospitals, it is to be noted that it is equipped with a laboratory, an operating theatre and an electro-therapeutic

installation, while, owing to its position, only four miles from Beirut, it is in close touch with the medical life there, and is the teaching centre for mental diseases of the American University, to which Dr. Watson Smith is the lecturer, while the Rockefeller Foundation has made a special grant to the hospital for the support of a student for a lengthened course of instruction with residence in the institution. The value of this will be readily seen when it is realized that such students trained here may be scattered as doctors over Syria, Palestine, Irak, Egypt and the Soudan. It is impossible to review this report without reading into it the fine spirit and high sense of duty which lies behind the whole work, and the London Committee, Auxiliary Committees and Medical Director are to be congratulated upon their great achievement.

### FEDERATED MALAY STATES CENTRAL MENTAL HOSPITAL.

The report is for the year 1924, and is remarkable in showing a very considerable increase in the admission-rate both from Kedah and the Federated Malay States proper, which, Dr. Samuels notes, occurred chiefly during the last quarter of the year, which is unusual. The total admissions for the year numbered 614, which is the highest ever recorded—a striking increase, having in mind the fact that admissions from Singapore are not now received here: Kuala Lumpur, Seremban and Ipoh (the areas of greatest concentration of population) were responsible for the chief increase in the admission-rate. The recovery-rate for the year was 37.9%, chiefly culled from the cases of recent melancholia, recent mania, and confusional insanity, a few cases of recovery of primary dementia are recorded, of which Dr. Samuels does not speak very hopefully.

As regards ætiology—

"We find gastro-intestinal system at the head. This of course includes intestinal parasites and various intestinal troubles. Hæmopoietic system comes next, cardio-vascular degeneration next, followed by alcohol and syphilis. Malaria comes immediately after syphilis. This order is the same as last year.

"This matter of numbers shows alcohol and syphilis occupying the fourth and fifth places on the list, but if we analyse the figures we will see that in reality alcohol and syphilis are much more dangerous than any of the others, because, whereas alcohol and syphilis appear almost invariably as primary causes, the others are almost always found as merely contributory causes.

"'Gastro-intestinal' system, for example, does not appear once as a primary cause, whereas alcohol appears 30 times as primary out of a total of 38 appearances, and syphilis appears 24 times as a primary cause in 28 appearances. Syphilis, I fancy, should appear more often, but we do not enter syphilis as a cause unless we get a positive Wassermann, and as we do not send up all the bloods to test, it is quite possible a great many escape notice. I hope to be able to arrange to have more Wassermanns done in future.

"It must also be remembered that most of the cases attributed to cardio-vascular degeneration may be attributed to

either alcohol or syphilis.

"I again differentiate, when making up the ætiological table between Chinese and Tamils whose illness was due to alcohol, and find that the Chinese appeared two and a half times as often as Tamils.

"This for a race that used to be known for its sobriety is distinctly disquieting, and I am firmly convinced that the giving up of opium is leading the Chinese to alcohol, and that being so all one can say is that the last state of these men is worse than the first."

The death-rate for the year was 6.6% of the average number resident, and deaths from phthisis head the list, followed closely by dysentery and general paralysis of the insane. This is the lowest death-rate ever recorded in this institution, and is attributed to some extent to the practice of isolating all cases of dysentery and phthisis, and of having the stools of every chronic patient examined when he comes up for his periodical examination.

Sixty cases absconded during the year, and Dr. Samuels' remarks

on these are interesting:

"I suppose some people throw up their hands at the appalling state of affairs which must exist when 60 patients can get away in one year. But I think those will probably be people who know nothing of my methods. Those who do will know that my practice is to give as much freedom as possible, and to give as many patients as possible the advantage of healthy employment. I would prefer to have escapes rather than have patients cooped up in the wards and cells all day, the latter method being the surest way to push patients into dementia."

The public even now rarely realize that the surest way to prevent escapes and the surest way to prevent recovery is to build walls high enough and in sufficient number, and rarely give credit to the medical superintendent, who is prepared to take any amount of risk purely in the interest of the patient rather than do this. An escape usually means that the medical superintendent has the interest and the welfare of his patient at heart, whatever else it may mean.

Dr. Samuels is to be congratulated on his year's work; his diffi-

culties and anxieties are known now to all of us.

### Part IV.—Notes and News.

#### THE ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION.

THE usual Quarterly meeting of the Association was held on Tuesday, February 16, 1926, at 19B, Tavistock Square, London, W.C. 1, the chair being occupied by the President, Sir Frederick Mott, K.B.E., F.R.S.

The Council and Committees met earlier on the same day.

#### MINUTES.

The minutes of the previous meeting, having already appeared in the Journal, were taken as read. They were approved and signed by the Chairman.

#### OBITUARY.

#### The Death of Dr. Henry Rayner.

The President said he regretted to announce the death of Dr. Rayner, who had been a very important and active member of the Association. He had filled the posts of General Secretary, Editor of the Journal and President, and in many directions the Association owed much to him.

Dr. Percy Smith said he had been closely associated with the deceased member for the past twenty years on the Council of the Mental After-Care Association, and it was only early last month that he wrote to say he was obliged to resign the Chairmanship because he found that his health was failing. In fact he had not been able to attend its meetings during the winter months. It was only as recently as February 3 that he wrote a letter to Miss Vickers, the Secretary, sending a donation of £500 to the funds of the After-Care Association. As he died five days later, on February 8, it was evident that he retained the full vigour of his faculties to the last. He had reached the age of 84. He would also remind his hearers that Dr. Rayner, Dr. Hack Tuke and Mr. Hawkins (who was Chaplain of Colney Hatch Asylum) were the founders of the After-Care Association for helping recovered patients on their discharge from asylums. The amount of work done by their deceased friend for that body between 1878 and the present time had been enormous, and he maintained the fullest sympathy with it right up to the end. Dr. Rayner entered as a student at St. Thomas's Hospital in 1861. He took several prizes in the school, and qualified for the Cheselden Medal. In 1870 he began his connection with mental diseases as assistant medical officer to Bethlem Hospital, where he was under Dr. Rhys Williams, the Superintendent, also a St. Thomas's man. In 1872 he went to Hanwell Asylum, and was Superintendent there for many years. Dr. Rayner joined the Medico-Psychological Association in 1870; he was General Secretary of it from 1877 to 1889, and was its President in 1884 and 1885, the year the speaker joined. He was Editor of the Journal from 1895 to 1911. In 1878 he commenced his lectureship in Mental Diseases at St. Thomas's Hospital; and it was important to mention that Dr. Rayner started the first out-patient department for mental diseases in connection with any general hospital in London, i.e., at St. Thomas's. It was still in being, now under Dr. Stoddart.

He had said enough to make it clear that Dr. Rayner did an enormous amount of work for this Association, as well as a very great work of a charitable nature for the After-Care Association. At the last meeting of the Council of that body a vote of condolence was requested to be sent to the relatives expressing appreciation of what he had done. He was buried on February 12. He did not know whether any member of this Association was able to be present at the funeral, but the Mental After-Care Association was represented at it. It would be right for this meeting to decide that the General Secretary send a letter of condolence to his relatives, expressing appreciation of the work he had done for the Association. Dr. Rayner was survived by Mrs. Rayner and a married daughter, and by two sons who were in the medical profession.

This was agreed to by members rising in silence.

#### The late Dr. W. D. Moore.

Dr. Percy Smith said another member of the Association died quite recently, namely, Dr. Moore, of the Holloway Sanatorium, Virginia Water. A fortnight before this his predecessor in the institution, Dr. Rhys Phillips, also died.

A resolution of sympathy and condolence with his family was carried in silence.

#### MATTERS ARISING OUT OF THE COUNCIL MEETING.

Dr. Worth (General Secretary) said that at the meeting of the Council that day the Treasurer asked permission to invest £800 of the Association's funds and also £150 of the Gaskell Fund. Owing to several of the Gaskell Fund Trustees having died it was necessary to fill the vacancies so caused. They had been filled by Dr. M. J. Nolan and Dr. W. F. Menzies, Past Presidents. The late Dr. H. Rayner was also a Trustee, and the present President, Sir Frederick Mott, had consented to take his place.

In the Foundation Scholarship at Epsom College, the Association had ten votes, and it was suggested at the Council meeting that these could beneficially be given to a candidate proposed by Dr. Rambaut.

The Association had been invited by the General Nursing Council to send representatives to a conference to amend the syllabus for the nursing of mental defectives. It was decided to ask Dr. E. S. Littlejohn, Dr. Langdon Down, Dr. F. D. Turner and Miss Turner, Matron at the Royal Eastern Counties Institution, Colchester, to represent the Association.

Members will have noticed that since the last gathering the meeting-place of the Association had been changed. He announced the terms of the agreement with the British Medical Association.

The winner of the Gaskell Prize was Dr. W. S. Dawson, of the Maudsley Hospital. The Council decided to recommend the granting of two extra prizes of £20, namely, to Dr. William Moody, of Horton Mental Hospital, Epsom, and Dr. John Bostock, of the Mental Hospital, Sydney.

As members were probably aware, an attempt was being made to bring all civil servants, including the officers and staffs of mental hospitals, under the Local Government and other Officers' Superannuation Act, 1922. But the provisions of that Act were not so good as were those under the Asylums Officers' Superannuation Act, 1909. Therefore a subcommittee had been formed to draw up a précis of evidence to be presented to the Departmental Committee. It was felt that inclusion under the 1922 Act should be opposed strenuously. To-day the Council proposed that a letter be written from the Association to the Chairman of the Departmental Committee, requesting that the mental hospital employees be treated as an excepted service, like school teachers and the police. It was hoped that this general meeting would agree to that course. He, the speaker, formally proposed that the letter be authorized.

Lt.-Col. J. R. LORD seconded, and it was carried.

The SECRETARY announced that the Annual Meeting this year would be held in London, commencing on Monday, July 12.

## ELECTION OF NEW MEMBERS.

The President nominated Dr. D. McRae and Dr. T. C. Mackenzie as scrutineers for the ballot.

The following were unanimously elected ordinary members of the Association: RAMSAY, JOHNSTON CAMPBELL, M.B., B.Ch.Belf., Assistant Medical Officer. Claybury Mental Hospital, Woodford Bridge, Essex.

Proposed by Drs. G. F. Barham, F. Paine and H. W. Parnis.

BOYD, WILLIAM, M.B., Ch.B.Edin., D.P.H., Assistant Medical Officer, Fife and Kinross District Asylum, Cupar, Fife.

Proposed by Drs. Jas. W. Skeen, C. J. Shaw and F. E. Reynolds. Hopwood, Joseph Stanley, M.B., B.S., M.R.C.S., L.R.C.P.Lond., Medical Officer, State Criminal Lunatic Asylum, Broadmoor.

Proposed by Drs. R. Fitzroy Jarrett, R. Worth and G. Warwick Smith. WALK, ALEXANDER, M.D.Lond., D.P.M., Assistant Medical Officer, Cane Hill Mental Hospital, Coulsdon, Surrey.

Proposed by Drs. S. Elgee, O. P. Napier Pearn and P. McLuskie.

## DISCUSSIONS ON PSYCHIATRIC SUBJECTS OF PUBLIC INTEREST.

The President said he had been approached by several important members of the Association with regard to the desirability of holding discussions on psychiatric subjects of public interest. It had been suggested that these would be psycho-analysis, and the question of sterilization of mental defectives. These were both occupying a good deal of attention in the public Press at the moment, and he thought some opinion by the Association on them would be valuable, especially if the Medico-Legal Society or members of the legal profession could be induced to take part in their proceedings.

A long discussion followed, in which Prof. G. M. ROBERTSON, Col. I. R. LORD, and Drs. J. G. Soutar, Bedford Pierce, L. J. W. Tighe, D. McRae, J. Carswell, PERCY SMITH, R. EAGER and T. C. MACKENZIE took part. The acoustics of the hall were very bad, causing much confusion and misunderstanding as to the point at issue. This was to some extent remedied later. To test the feeling of the meeting

LXXII.

Col. LORD proposed that the May meeting be extended to two days: the first would be devoted to hearing the Maudsley Lecture, and the second to a discussion of a subject to be selected by the President and General Secretary. On being put to the meeting the motion was declared lost.

#### PAPER.

"Blood and Vascular Conditions in Psychoses," by Dr. ISABEL McDougall ROBERTSON.

The President said he felt that members would wish to thank Dr. Robertson for her paper, which was a very valuable one.

Dr. F. L. Golla said he thought Dr. Robertson was correct in saying that this reaction was one which could be obtained with unfailing accuracy if proper precautions were taken; it was the precautions which were of value. Given certain precautions, after the ingestion of milk it could be obtained in all cases. But if anybody carried out the reactions in the hope of discovering some form of mental or nervous disease he would be disappointed. These tests were an index of a reaction of the involuntary nervous system to this stimulus. One of the most interesting results was obtained in the case of normal people on a change of posture-lying down and standing up. Dr. Robertson found that in one posture she got leucocytosis, in the other leucopenia; in cases giving the hæmoclastic crisis the reaction was recovered. Therefore it was a simple phenomenon, which was uncomplicated by the question of the ingestion or absorption of foreign proteins. In the hæmocratic crisis, after breakfast there could be a leucocytosis, and later there might be a change—in fact any alteration of the state of stability of the person would cause the reaction. In 1912 there was found to be the same reaction in the bronchi and the musculature of the lungs; that if the bronchioles were contracted, as in asthma, there was one reaction, if dilated there was reversibility—the same reversibility as in the sympathetic system elsewhere. A minute dose of adrenalin would cause relaxation, a larger dose would cause constriction. These reactions depended on the state of the receptive organs.

These results seemed to him to be of interest, not because they furnished any diagnosis of the disease—they did not do that—but because they showed that there was an organism permanently in a certain state of equilibrium, or dysequilibrium, in which stimulation of that system might be caused by alteration in position, or it might be by ingestion of milk, or it might be by simply pricking the skin and injecting a drop of distilled water. Whatever might be chosen for the stimulus there was an abnormal response; and if there was a reversal of that response it did not mean it was anything of enormous importance. It might mean that a person during anger or grief might get a vegetative system response different from the normal. The trouble was that it was because it was a response of a very delicate nature on the part of the vegetative nervous system, and the action on the arterioles and capillaries was so delicate that it required great clinical acumen to obtain the reaction. It had to be remembered that it was not a matter of indifference if the skin were pricked twice within two or three minutes; if one obtained the blood by pricking on two occasions within two or three minutes of each other, the leucocytes and the reds would be different on those separate occasions; and that was only an expression of the alteration of the calibre of the blood-vessels in response to the skin stimulus. If one allowed over five minutes to elapse between the two prickings the difference was not so marked, and within an hour the normal equability had been restored. And care must always be taken to have the patient's arm held in the same way. He had watched Miss Robertson at work and had seen the precautions she took, and she invariably got constant results. After the diagnosis the cases were referred to the hospital. In cases of dementia præcox there was a particular form of stimulus for reactions of the vegetative nervous system; and by thyroid or adrenalin administration some means of treatment were available.

A further point was the prognosis. On writing to the doctors of patients after their discharge, it was found that the vast majority of those patients who gave one reaction were worse after three months, while those who gave the other reaction were better. It seemed, therefore, that this reaction was of some use in prognosis; it pointed to a certain disposition in the nervous system, but the less it was dogmatized about at present the better. He did not regard it as an

anaphylactic reaction; it was one which could be induced by multiple stimuli—stimuli which could not be co-ordinated with the ingestion of any foreign protein. Dr. Robertson had not given in this paper all the later results she had arrived at, such as the hydrogen ion content of the blood, but some of these data were being compiled.

The results she had given showed clearly that there was an abnormality of reaction of the blood to various stimuli in cases which also showed the hæmoclasic reaction, and that was of great importance. Reactions might be reversed if there occurred alterations in the ion distribution.

The great point about the reaction seemed to be that at the bottom of these nervous conditions there was a maldisposition of the vegetative nervous system. If the whole body reacted in an abnormal fashion to such a simple stimulus as lying down, it was not difficult to understand how, in organic reactions, the emotion would be disturbed profoundly in the types of cases Perhaps the less one said about mechanism the better. under consideration. Much had been said about the relationship of the splanchnic and vaso-motor mechanisms, but the skin was the great centre for reactions. The response might show itself in a local splanchnic area, especially the liver, because the liver could absorb such a large proportion of the blood of the body. Owing to the adjustments which took place between basic and central mechanisms, puzzling alterations of response occurred. This research he regarded as of fundamental importance because, for the first time, they were getting physiologically what the President had shown histologically—a generalized alteration of tissues throughout the body in what were called the psychoses. When investigating function, one had not to think about whether a patient's functions were statically abnormal whether, for instance, one could find an abnormal urine-but how did he respond to some stimulus? It might be a violent stimulus, or it might be only a very mild one. Those were the lines on which the work was going forward in the laboratory, trying to ascertain how patients were reacting to stimuli.

Dr. A. W. Petrie said he had gone over these figures with Miss Robertson and he had tried to arrive at a diagnosis, but he, like others, had found it hard to do so in very early psychoses or even neuroses, especially as the people did not always remain in the same state. A large mass of figures was gone through, and one or two facts stood out. One was, that the anxiety cases presented a very considerable proportion of positives, and that was what made the figures, in regard to prognosis, difficult, because the anxiety type of case, whether it improved or recovered, could be treated at home, and only came back to the hospital when they had had an exacerbation. A high proportion of anxiety cases gave a positive reaction. He would like to know what state they were in when they did not give a positive reaction; they had not close enough notes when the test was taken. Possibly a person in an exaggerated condition, with tremors, would always give the reaction. In the other cases, which did not give real tremors, there may have been a mistake in the diagnosis. About 80% or anxiety cases gave the positive reaction. Another result which came out was that a very high proportion of cases of dementia præcox gave it. They were labelled as of three degrees-dementia præcox plus, dementia præcox, and dementia præcox minus. It was very difficult to label early adolescent cases as to whether they were præcox or manic-depressive. In some cases in which there was grave doubt the test conformed to the after-effects, i.e., they became afterwards cases of stiff dementia præcox. In such cases, no doubt, the test would help greatly in prognosis. As to the melancholias, he was left in doubt. He tried to think of the type of melancholia which started with the anxiety type of symptoms, but of those there were very few to choose from, and he was disappointed that that type did not always prove positive. It might be helpful in the hysterics, because of these a number proved negative. The impression he was left with was that those were all outstanding states of dementia præcox and that of anxiety, and that in both of them there was a very distinct disturbance of the vegetative nervous system. It was, however, difficult to give a prognostic value to the test, i.s., as to which persons were likely to end up by being certifiable.

The PRESIDENT remarked that he was glad to hear Dr. Golla say this test was not so useful as a means of diagnosis as it was a fundamental principle with regard to the influence of the vegetative nervous system. But it was a very important piece of work as showing the disequilibrium of the vegetative nervous system

which was common to all these forms of psychosis. He thought that possibly owing to the alteration in the hydrogen-ion content of the blood, the surface tension of the fluid might be altered, so that the leucocytes adhered more to the side of the vessel. When the capillaries were injured, the same number of leucocytes did not come out into the blood; he understood that the effect on the red cells was less than on the whites. Members would fully appreciate the value of this long and careful piece of work, and, on behalf of those present, he begged to thank Dr. Robertson for her paper.

The thanks were accorded by acclamation.

#### CONGRATULATIONS.

The President said he felt that members of the Association would wish to offer to Prof. Robertson their cordial congratulations on his being elected President of the Royal College of Physicians of Edinburgh. A very distinguished former member of this Association had occupied that post in the past, Dr. Clouston, afterwards Sir Thomas Clouston. Dr. Robertson succeeded Clouston at Morningside Asylum, and now he had followed him to that other very distinguished honour. (Applause.)

Prof. ROBERTSON, in reply, said it was very kind of the President to make that speech in the name of the members, and assured the gathering that what gave him as much pride in the new post to which he had been elected as anything was that the new President of the College should be a member of this specialty.

#### SCOTTISH DIVISION.

THE AUTUMN MEETING of the Scottish Division was held at Craig House, The Royal Hospital at Morningside, Edinburgh, on Friday, November 27, 1925.

Prof. G. M. Robertson occupied the Chair, and thirty-five members registered themselves as being present.

The minutes of the last Divisional Meeting were read and approved, and signed by the Chairman.

The Secretary submitted letters of acknowledgment from Mrs. Parker and Dr. J. S. Fraser, thanking the Division for its letters of sympathy.

Apologies for absence were intimated from Sir Arthur Rose and others.

The Business Committee was appointed, consisting of the Nominated Members of Council, the two Representative Members of Council, the Chairman of the Division ex officio, along with Dr. Douglas McRae, Dr. Aidan Thomson and the Divisional Secretary.

Dr. R. B. Campbell and Dr. Neil T. Kerr were nominated for the position of Representative Members of Council, and Dr. Wm. M. Buchanan was nominated for the position of Divisional Secretary.

The following candidates, after ballot, were admitted as ordinary members of the Association:

JOHN KING GRANT, M.B., Ch.B.Aberd., Assistant Physician, Aberdeen Royal Mental Hospital, Aberdeen.

Proposed by Drs. Dods Brown, Annandale and Craig.

AGNES MILDRED MACGOWAN, M.B., Ch.B.Edin., Assistant Medical Officer and Pathologist, Bangour Mental Hospital, Bangour, West Lothian.

Proposed by Drs. Keay, Crichlow and Buchanan.

Donald Ewan Cameron, M.B., Ch.B.Glasg., Assistant Medical Officer, Glasgow Royal Mental Hospital, Gartnavel, Glasgow.

Proposed by Drs. D. K. Henderson, Aidan Thomson and Skottowe.

The Secretary reported that the Registrar of the General Nursing Council for Scotland had intimated his Council's agreement to the Division's wishes as to the teaching of anatomy and physiology of the nervous system. The Advisory Committee of the Division, since the date of last meeting, had also (1) fixed the time allowed for the G.N.C. Final Written Paper at 3 hours; (2) agreed upon a list of equipment for the G.N.C. Final Oral and Practical Examination; (3) nominated Medical and Nurse Examiners for the written and oral and practical parts of the said examination; (4) adjusted the form of the certificate of instruction for candidates.

With regard to the Draft Amending Bill to the Asylum Officers' Superannuation Act, 1909, which had been approved by the Association, the SECRETARY intimated that it would probably be introduced into the House of Commons at an early date as a Private Member's Bill.

In this connection it was also reported that the desirability of including the pathologists of joint pathological schemes within the provisions of the Superannuation Act had been represented to the Secretary of the Conference which had drafted the Amending Bill. A reply of date June 24, 1925, was read regretting that, as the Bill had been finally drafted, the suggestion had been received too late, and suggesting that representation might be made in the proper quarter if and when the Bill reached the committee stage.

Dr. Campbell extended a cordial invitation to the Division to hold its next meeting at the Stirling District Mental Hospital. The Chairman thanked Dr. Campbell, and it was unanimously agreed that the Spring Meeting take place at Larbert in May.

Dr. T. M. Davie, M.C., presented a case of pellagra (vide p. 211), and Dr. Carmichael read a short résumé of the pathology of this disease based on his own and Dr. Susman's work. An interesting discussion ensued, taken part in by Drs. Dods Brown, J. H. Macdonald, McRae, Donald Ross, Shaw and Prof. Robertson.

Members were kindly entertained to lunch at Craig House, after which, on the motion of Dr. Carswell, the Managers of the Royal Hospital at Morningside and Prof. Robertson were cordially thanked for the arrangements made in connection with the meeting and for their kind hospitality.

After lunch members were conducted over the Hospital by Prof. Robertson and his assistants.

On the meeting re-assembling, Prof. Robertson read a paper on "The Management of Noisy Patients," which was discussed by Drs. Donald Ross, Hotchkis, Carswell, Aldan Thomson, Skottowe, J. H. Macdonald, Shaw, Barclay and McAlister.

A vote of thanks to the Chairman terminated the business of the meeting.

## EDUCATIONAL NOTES.

London County Council.—The Maudsley Hospital, Denmark Hill, S.E. 5 (University of London).—Lectures and Practical Courses of Instruction, under the direction of Sir Frederick Mott, K.B.E., for a Diploma of Psychological Medicine: Ninth Course, 1926. Part II.

- (1) Eight lectures on the Psychoneuroses. By Bernard Hart, M.D., M.R.C.P. On Mondays at 3.30 and 5.30 p.m., commencing May 3, 1926.
- (2) Eight lectures on Morbid Psychology. By Edward Mapother, M.D., M.R.C.P., F.R.C.S. On Tuesdays at 2.30 and 4.30 p.m., commencing April 6, 1926.
- (3) Four lectures on the Pathology of Mental Diseases, including Brain Syphilis, Its Symptomatology and Treatment. By Sir Frederick Mott, K.B.E., LL.D., M.D., F.R.C.P., F.R.S. On Fridays at 2.30 p.m., commencing May 7, 1926.
- (4) Two lectures on the Legal Relationships of Insanity and Treatment. By C. Hubert Bond, D.Sc., M.D., F.R.C.P. On Tuesdays, June 1 and 8, 1926, at 3 p.m.
- (5) Eight lectures on the Practical Aspect of Mental Deficiency. By F. C. Shrubsall, M.D., F.R.C.P. On Thursdays at 2.30 p.m., commencing April 15, 1926, transferring to Tuesdays in May.
- (6) Four lectures on Crime and Insanity. By W. Norwood East, M.D. On Tuesdays at 4.30 p.m., commencing May 4, 1926.
- (7) Two lectures on Abnormalities of the Fundus Oculi. By R. Foster Moore, O.B.E., M.A., B.Ch., F.R.C.S. On Wednesdays, May 5 and 12, 1026, at 5,15 p.m.
- O.B.E., M.A., B.Ch., F.R.C.S. On Wednesdays, May 5 and 12, 1926, at 5.15 p.m.
  (8) Three lectures on Therapeutics. By A. A. W. Petrie, M.D., F.R.C.S.,
  M.R.C.P., D.P.M. On Thursdays at 4 p.m., commencing April 8, 1926.
- M.R.C.P., D.P.M. On Thursdays at 4 p.m., commencing April 8, 1926.

  (9) Six Demonstrations in Clinical Psychiatry. By Edward Mapother, M.D., M.R.C.P., F.R.C.S. On Wednesdays at 2.30 p.m., commencing May 5, 1926.
- (10) Twelve Clinical Demonstrations in Neurology. Six by Sir Frederick Mott, K.B.E., LL.D., M.D., F.R.C.P., F.R.S. On Fridays in April and June, commencing April 9, 1926, at 2.30 p.m., at St. Giles's Hospital, Camberwell.

Six by F. L. Golla, M.D., F.R.C.P. On Thursdays, at 2.30 p.m., commencing May 6, 1926, at the Hospital for Paralysis and Epilepsy, Maida Vale.

Fees: For whole of Part II, £10 10s.; for a single series of Lectures, £2 2s. Inquiries as to Lectures, etc., should be addressed to "The Director of the Pathological Laboratory," Maudsley Hospital, Denmark Hill, London, S.E. 5.

In addition to the special lectures and demonstrations of the above course, there is opportunity for clinical experience and instruction available at the Hospital. In particular there are a limited number of appointments available as clinical assistants; service in this capacity (either whole time or part time) is recognized by the various examining bodies as constituting the clinical experience required by the regulations for the Diploma.

University of London, Imperial Institute Road, South Kensington, S.W. 7.—A course of lectures on Mental Deficiency for medical practitioners, supplemented by a course of Clinical Instruction, has been arranged by the University Extension Board in co-operation with the Central Association for Mental Welfare commencing May 31 to June 5, 1926.

It is intended for qualified Medical Practitioners and more especially for those who are engaged as certifying officers to local authorities under the Mental Deficiency Act, 1913, as School Medical Officers or as medical officers of institutions, or who are otherwise definitely concerned with defectives. The course will be based on the requirements of the syllabus for the University of London Diploma in Psychological Medicine. The University will grant a certificate of attendance to those who have attended the whole course regularly, taking both theoretical and practical work—

- (1) Mental Deficiency. Seven lectures by A. F. Tredgold, Esq., M.D., M.R.C.P., F.R.S.E.
- (2) Administrative Procedure in the Ascertainment and Treatment of the Mentally Defective. Three lectures by F. C. Shrubsall, Esq., M.A., M.D., F.R.C.P.
- (3) The Psychology of Mental Defectives. Two lectures by Prof. Cyril Burt, M.A., D.Sc.
  - (4) Crime and Mental Defect. Lecture by W. Norwood East, Esq., M.D.

Clinical Work: The clinical work will consist of visits to special schools for mentally defective children and to residential institutions in or near London, and demonstrations by well-known experts to small groups of students of individual cases of defect.

Fees and Applications: Registration Fee, 10s. 6d.; Fee for the course, £2 12s. 6d. Cheques should be made payable to Miss Evelyn Fox, C.A.M.W., and crossed Barclay's Bank, Ltd. All communications with regard to the course should be addressed to Miss Evelyn Fox, c/o University Extension Department, University of London, South Kensington, S.W. 7.

## OBSERVATIONS ON A MENTAL HOSPITAL DEATH-RATE.(1)

By W. Gordon Masefield, M.R.C.S., L.R.C.P., D.P.M., Medical Superintendent, Essex County Mental Hospital, Brentwood.

## [Abstract.]

In order to find out the exact position regarding the death-rate at this Hospital (Essex County Mental Hospital, Severalls), I have taken the five-year period 1920-1924 inclusive, and have endeavoured to pick out some points of general interest.

The points involved are heating and lighting, nursing staff and diet, and the greatest of these is diet! During the war years the evil results of inadequate diet, overcrowded and insufficiently heated wards and an insufficient and untrained staff were shown in glaring fashion, and the death-rate figures soared.

<sup>(1)</sup> A paper read at the Spring Meeting of the South-Eastern Division, April 30, 1925, at which time the author was on the Medical Staff of Severalls Mental Hospital, Colchester.

Owing to these entirely abnormal conditions it is useless to take the figures of these years. The period 1920-1924 is, however, one of normal conditions, and the figures make satisfactory reading.

For all the county and borough mental hospitals of England and Wales, the average percentage death-rate figures are: 1920, 8.74; 1921, 8.37; 1922, 8.99; 1923, 7.71; 1924, not yet available; and for this hospital: 1920, 7.2; 1921, 6.4; 1922, 7.9; 1923, 7.7; 1924, 5.87.

During the same period our average daily number of patients has gradually

risen from 1,430 in 1920 to 1,618 last year.

The total number of deaths during the period under review is 525, and in 82% of these cases a post-mortem examination was made, so that the certified causes of death should be true findings without the element of guess-work which unfortunately vitiates the figures of alleged causes of death among the general public.

A somewhat remarkable fact is that the average age at death on the female side is 57.43 years, and on the male side 57.42. No less than 29% of the total deaths have been of persons 70 years of age or over, and 53% were over 65.

Leaving out senility or senile decay, the more common causes of death were: Tuberculosis, 10% of total deaths; cardiac disease, 9%; general paralysis, 8%; epilepsy, 4%; cancer, 3%; exhaustion of acute mental disorder, 4%; influenza, 3%.

It is regrettable to find that tuberculosis heads this list, for this disease is classed as a "preventable" disease. At this hospital we have each year an average of 11 deaths from this cause—phthisis largely predominating—and of these exactly one-half have been of cases of dementia præcox of katatonic form. As is well known, the stock from which these cases arise is poor, and their resistance is exceedingly small. Definite phthisical heredity is common, but is by no means so evident as a psycho-neurotic or psychotic heredity. In fact, the parents of these katatonic cases make a most interesting study—the maternal taint appearing to be the most common.

I do not think it can be denied that this form of mental disorder—when stupor or prolonged excitement is a marked symptom—has a definitely bad prognosis as regards life. Despite the best hygienic conditions and despite the most careful and conscientious nursing, signs of pulmonary tuberculosis show themselves, and once established, the disease finds them an easy prey. The well-known factor of shallow breathing involving deficient suction action of the thorax, and hence a sluggish return circulation, of course aids the tubercle bacillus in its ravages. If we consider the other main groups of Kraepelin's dementia præcox, we do not find the same marked tendency to fall victims of tuberculosis, and it appears to be worth consideration whether this difference in prognosis should not receive more definite recognition.

In a series of 15 such female cases, dying either of pulmonary tuberculosis or exhaustion, the small size of the heart has been most noticeable. The organ has appeared macroscopically to be healthy as regards the musculature and without valvular disease, but in a more or less "infantile" state, the average weight being only 6 oz. The average age at death of this series of cases was 31. May this not be another piece of evidence that the disease should be reckoned among the abiotrophic diseases? I think that the time may come when the Registrar-General may pass without comment as a cause of death "katatonic dementia præcox," just as readily as he already does the far less common abiotrophic diseases such as Friedrich's ataxy, or amaurotic family idiocy.

For the period of five years, deaths from general paralysis account for 16% of the total male deaths and for 2% of the total female deaths. The average age at death of the male general paralytic was 43—the youngest being 25, and the oldest 61. More than half these cases lived less than a year in hospital—but in the series are 2 cases whose hospital lives were prolonged for 6 and 9 years respectively. During the year 1924 induced malaria treatment was adopted for all possible cases. Some observers have put forward, recently, the theory that the type of the more recent cases of general paralysis shows a change, i.e., that they tend to run a more protracted course than was the case a few years ago, with more frequent reimssions, and thus they account for the reported improvement following therapeutic malaria. It is not easy to see the reasons for such a change of type, though doubtless the arsenical treatment of the original syphilitic infection will be considered responsible. From our experience of the induced malaria treatment

at this hospital, we believe it to be a perfectly safe form of treatment, and that it appears to prolong life—therefore, obviously, it should be given a very thorough trial. The numbers treated are, however, small, and it is too early to draw any more definite conclusions, but of our treated cases two men have returned to business life, and one lady is now engaged in learning to drive a motor car!

In any consideration of a mental hospital death-rate the most striking fact is the large number of deaths at an advanced age. It is necessary to emphasize this, because it brings into prominence the undoubted fact that a very considerable portion of the time and energies of the staff is expended in caring for senile patients.

During the past five years 15% of the total male deaths have been of cases which have died within one month of admission, and the figure on the female side is 10%, and half these cases have died of senile decay. Many of them have been brought many miles, and have been much exhausted by the journey; some have arrived in a moribund condition. A mental hospital must of necessity always have a considerable number of senile cases amongst its population, but it does not appear necessary to consider it the natural home of the aged poor.

As regards the 9% of the total deaths which are due to heart disease, there is little that calls for comment. Fifteen % of the total deaths in the general community (above 15 years of age) are certified as being due to this cause. Obviously, the less frequent post-mortem confirmation of the diagnosis may account for this difference. Serious valvular heart disease is uncommon among mental patients, myocardial degeneration being far more often found. As a terminal condition in this latter form, during the period under review, there have been two instances of the rupture of the ventricular wall. In one case, a man of 67, there was a rent 2 in. long in the left ventricle, and in the other case, an old lady of 77, the tear was in the right ventricle. In a third case, an epileptic, aged 54, died during a fit, and post mortem was found to have a tear in his aorta immediately above the anterior coronary artery. He had, of course, very pronounced atheroma. Such sudden occurrences are probably more common than is generally supposed.

Epilepsy as a primary cause accounts for 4% of the deaths, and there is no question that it shortens life. There are not a large number of elderly epileptics seen in a mental hospital. The average age at death of the epileptic here is only 36—sudden death is common, and post-mortem findings rare.

Dysentery and colitis, so long dreaded words in mental hospital work, have almost lost their terrors. In the five years, 4 deaths have been recorded as due to these causes, but there has been no epidemic. There are, however, among our patients a number who have suffered from this disease—mostly during the war period—and it may well be that the Flexner bacillus is still in our midst. How comes it that it does not raise its head? I suggest that the following are the necessary factors in the elimination of dysentery from the hospital records: (1) A sufficient diet with plentiful "extras" to every debilitated patient; (2) careful treatment and handling of all soiled linen; (3) unstinted use of soap and water, especially on side-room floors in the acute wards; and possibly (4) the very sparing use of that untrustworthy drug—sulphonal.

I believe very strongly that sulphonal has a great effect in debilitating patients, and so rendering them most vulnerable to disease-bearing organisms. In most cases it brings this about in a most insidious way, and chiefly by ruining the appetite and digestion. Sedative drugs are prescribed freely when thought necessary at this hospital, but the use of sulphonal is restricted to a very few cases. In addition to lowering the general physical health of a patient, this drug, when prescribed for a prolonged period, undoubtedly tends to lower a patient's self-esteem, causing him to become degraded in his ways and careless of ordinary decency.

Deaths from other forms of infectious disease include 3 of the enteric group and 16 from influenza. The deaths from influenza almost all occurred owing to an epidemic in the early months of 1922, in which broncho-pneumonia was a common and severe complication. On the whole, however, the incidence of influenza has been more noticeable among members of the nursing staff than among the patients.

It appears probable that living for the most part in warm but airy wards without any sharp variation in temperature is a protective influence. This also applies to the noticeable rarity of cases of acute bronchitis considering the number of vulnerable elderly individuals.

Turning now to the group of cases dying within a month after direct admission (and putting aside the senile cases), we find an interesting series of cases of acute confusion or delirium with definite physical disease. Such toxic cases include lobar pneumonia, influenza, nephritis, pulmonary abscess, pyosalpinx, acute Graves disease, and peritonitis following perforated gastric ulcer. Several of these cases were admitted in a moribund state, and the lives of some might have been saved had an early diagnosis of the underlying condition been possible.

In the Tenth Annual Report of the Board of Control it is pointed out that deaths from cancer in mental hospitals are much less frequent proportionately than in the community at large. Cancer causes 12% of the total adult deaths in England and Wales, but only 3% of these in the county and borough mental hospitals, and this (3%) is the figure at this hospital. This, to my mind, is a most interesting fact, and the difference is so great that it cannot arise by chance. Our knowledge of the ætiology of malignant disease is as yet so indefinite that we can merely conjecture. The majority of mental patients are of the so-called cancer age—45 to 50—(the average age of our direct admissions here is exactly 45), and yet the incidence of the disease is very small. If we accept the view that malignant disease is preceded by some chronic irritative process, it appears possible why mental patients are to some extent immune. The most common sites for the disease are, in the female sex, cervix uteri and breast, in the male sex, tongue and lip, and in both sexes, œsophagus, stomach, colon and rectum. It is plain that residents in a mental hospital have little chance of being the victims of a recent erosion of the cervix—the forerunner of carcinoma—and the women that are admitted as mental patients between the ages of 40 and 50 are not the happily married mothers, but, as a rule, the disappointed spinsters. As cancer of the breast equally affects women who have borne children and nulliparæ, it is not surprising to find that this is by far the most common form met with among women in a mental hospital, but the death-rate can be kept very low by early diagnosis and up-to-date surgery.

As regards epithelioma of the tongue and lip, of which excessive smoking is universally considered to be the exciting cause, it is easy to see that this factor is to all intents and purposes ruled out under mental hospital conditions, and therefore this form does not arise among mental patients. The sources of irritation which contribute to carcinoma of the alimentary tract may be considered to be food and drink swallowed too hot, highly seasoned articles of food, possibly excessive meat-eating, and habitual constipation. Under mental hospital regime patients have wholesome plain food, seldom, I should say, served too hot, and routine aperient medicine by preventing chronic constipation may be said to minimize the irritation of colon and rectum. This beneficent dose, whether in the form of pill, powder or fluid, should also receive due credit for that remarkable absence of intra-peritoneal conflict among mental patients.

## OBITUARY.

#### WILLIAM CHARLES SULLIVAN, M.D.,

Medical Superintendent, State Criminal Lunatic Asylum, Broadmoor.

The State has lost a highly valued and distinguished officer by the death of Dr. William Charles Sullivan on February 26 in his fifty-eighth year. Even those of his friends who were aware that he was in indifferent health were quite unprepared for the news of his death. They anticipated that his condition would improve, and hoped that he would be able to carry out those projects for the future he had in mind. The youngest son of William Kirby Sullivan, Doctor of Philosophy and President of Queen's College, Cork, he was educated at Cork, Dublin and Paris. He was an Exhibitioner and Prizeman of Queen's College, Cork, and graduated M.B., B.Ch., B.A.O. at the Royal University of Ireland in 1891, and received the diploma in Psychological Medicine in 1892, and the Stewart Scholarship in Mental Diseases and the degree of M.D. in 1893. In the following year he continued his studies in the asylums and hospitals of Paris, and attended the School of Anthropology under Prof. L. Manoeuvrier. And it may well be that the work he did with the latter first directed his naturally inquiring

and scientific mind towards the study of criminal conduct, and decided his future career.

He joined the English Prison Service in the year 1897. To members of this Association the most interesting of his testimonials will be one from Conolly Norman, with whom he worked for over a year at the Richmond Asylum. The then President of the Medico-Psychological Association was obviously impressed by Sullivan's abilities, which were already shown to be of an exceptional order.

His first official appointment was on the medical staff at Liverpool Prison, whence he was transferred in due course to Parkhurst, Pentonville and Holloway Prisons. And in 1912 he was chosen to become the first Medical Superintendent of the State Criminal Lunatic Asylum at Rampton, which was then opened. So thoroughly did he justify his selection, that when Sir John Baker relinquished the post of Medical Superintendent of Broadmoor State Criminal Lunatic Asylum in 1920 Sullivan succeeded him, and held the office with conspicuous success until his death.

It was fortunate that of the four prisons at which Sullivan served from 1897 to 1912, three, Liverpool, Pentonville and Holloway, were particularly rich in material for research into the social causes of intemperance and its connection with attempted suicide, insanity and crime. And in the preface of his well-known book, Alcoholism: A Chapter in Social Pathology, published in 1906, he showed his appreciation of the opportunities afforded by his official position as prison medical officer, and stated-"It is on the study of the human documents of alcoholism which have thus been brought within my reach that this essay is mainly based." This volume, the result of an extended research, is characterized by the temperate presentation of the subject, and its scientific impartiality lends weight to the author's conclusions. In his summing-up he says: "We find that the extent of the alcoholic evil is represented by a considerable contribution to the amount of suicide; by a share in the causation of crime which, though small in relation to the total mass of delinquency, is of extreme importance by reason of the specially grave character of the offences comprised in it; by a comparatively small part in the causation of insanity; and lastly by an indefinite but certainly considerable influence in the production of many of the conditions of impaired development which underlie the perverted conduct of the socially unadaptable classes." He also concluded that nearly all the graver effects of intemperance were due to chronic intoxication, and hardly any to simple drunkenness except in one variety of sexual crime, namely, rape on adults. He considered the alcoholic evil in this country was "connected very much more with industrial than with convivial drinking, more with the use of alcohol as an aid to work than with its use as an aid to pleasure," and it is interesting to observe that even at this date he suggested that the most obvious and probably one of the most effective measures wherewith to combat industrial drinking would be an alteration of the hour of opening licensed houses. This work in particular caused its author to be recognized as an authority on alcoholism, and in 1916 he was appointed one of the distinguished members of the Advisory Committee to the Central Control Board (Liquor Traffic). The conclusions representing the unanimous judgment of this Committee were published in 1918, and it is needless to say were an authoritative and practical review of the state of scientific knowledge concerning the action of alcohol on the human organism.

Attention has already been called to the importance that Sullivan attached to industrial drinking, but investigations concerning the influence of alcohol on muscular energy, chiefly conducted with the ergograph were not always conformable. Many observers held that with moderate doses of alcohol the initial increase of energy was shortly followed by a disproportionate decrease of energy, with the result that its total effect on muscular work was disadvantageous. Rivers, taking special precautions to exclude the influence of suggestion, found that doses of 20 c.c. alcohol had no definite effect of any sort on the ergographic record, and under Sullivan's direction a series of experiments were carried out in munition factories to determine this point if possible. The workers who volunteered to co-operate in the experiments were unacquainted with the nature of the drug administered to them in a flavoured mixture, and the alcohol so given was little more than the equivalent of a pint of beer at 4 per cent. strength. Careful control tests were also made. In some 20 subjects similar results were obtained in each case. This limited number was recognized to give only provisional results,

requiring later confirmation, but the conclusions then arrived at were: That in the case of those subjects engaged in hard muscular work the dose resulted in a subjective sense of increased vigour, and in less marked degree by men doing less arduous work; that in no instance had the dose objectively any appreciable effect on muscular work, and the output of work was neither increased nor diminished; that after about three hours the sense of stimulation and lessened fatigue induced by the alcohol passed off, and the subject felt the need for another dose.

In a paper published in this Journal in 1900 Sullivan insisted that alcoholism was the predominant cause of attempted suicide. A similar conclusion was arrived at by another observer in a paper published in the Journal some years later, and it may be of some interest to mention that whereas 210 cases of attempted suicide were received on remand or awaiting trial into Brixton Prison in the year 1912, only 49 cases were received in the year 1922. Doubtless many factors have contributed to produce this result, but there can be no doubt in the minds of those with a practical acquaintance of the subject that the lessened amount of alcoholism following upon the liquor restrictions has materially affected the number of admissions and justified Sullivan's thesis.

The years he spent in the Criminal Lunatic Asylums were likewise marked by his indefatigable industry, and in the midst of his exacting administrative duties he found time to pursue his investigations, and he was appointed Lecturer on Criminology and Forensic Psychiatry at the Maudsley Hospital, and annually delivered a series of lectures as part of the course of post-graduate instruction in psychiatry organized by Sir Frederick Mott at that hospital. In the year 1924 his work on Crime and Insanity was published, and received immediate recognition as the most important contribution to the subject that had appeared in this country for many years. Surprisingly few of the statements in this work are really challengeable in view of the controversial nature of the subject, and the volume is written with the conciseness, lucidity and nicety of expression with which his readers had come to associate the author. One of the most illuminating chapters is that on Crime in Transitory Conditions of Mental Disorder, and his observations on alleged amnesia in accused persons are worthy of study by all those whose duties cause them to examine the mental condition of prisoners awaiting trial.

Sullivan, like many others, was not satisfied with the existing legal test of criminal responsibility, and in a discussion which took place at a meeting of the Hunterian Society of London in 1922 on "The Position of Insanity in Criminal Law," remarked that "It was sufficient simply to follow the parallel of other countries by the simple statement that responsibility was barred by the existence of a state of disease," and he considered this "was a perfectly intelligible formula, which could be fairly interpreted by the judges." But perhaps it might be less clear in practice to juries, who are in fact the judges; they might not always be in a position to distinguish between the initial stages of a pathological process and a slight abnormal variation of character, which Sullivan admitted was not necessarily a condition calling for any relaxation of the law. He did, however, concede that "in practice the legal doctrine of criminal responsibility has been innocuous; it has not produced its logical consequences, because it has never been fully applied."

Sullivan was a Fellow of the Royal Society of Medicine, and a member of the Society for the Study of Inebriety and the Eugenics Education Society. He was a member of the Criminal Responsibility Committee of this Association which reported to Lord Atkin's Committee on Crime and Insanity; and as far back as 1894 became a member of this Association. Two years later the Journal published what is believed to be his first paper, entitled "Note on a Case of General Paralysis with Marked Sensory Symptoms." Other papers followed: "A Note on the Influence of Maternal Inebriety on the Offspring," 1899; "The Relation of Alcoholism to Suicide in England," 1900; "Alcoholic Homicide," 1900; and "Crime in General Paralysis," 1902. He also reviewed for the Journal from time to time, and in 1921 contributed a masterly appreciation of Sir Bryan Donkin's admirable Lectures on Mental Defect and Criminal Conduct, which were delivered at the Maudsley Hospital. Among his other writings are an article on "Criminology of Alcoholism," Kelynack's *Drink Problem*, 1907; "Rapport au Congrès Internat. Penitent de Bruxelles 1900, sur l'Influence de l'Alcolisme sur le Criminalité," and "Mesure de l'Intelligence chez les Delinquantes," Ann. Psychol., 1912. He

contributed an article on "The Psychology of Murder in Modern Fiction" to the Gentleman's Magazine, November, 1904; an article on "Industrial Alcoholism" to the Economic Review, April, 1905; and one on "Shakespeare's Othello as a Study of the Morbid Psychology of Sex" to the XIX Century and After, June, 1919. Further, he was an Editorial writer to the Lancet. A student of many languages, a great and profound reader, with cultured and varied literary tastes, he was a keen and reliable literary critic. Possessed of marked literary ability, his writings gained force from the clear and succinct manner in which he was accustomed to present his scientific expositions on controversial subjects, and his common-sense opinions were founded upon wide practical experience.

It is well to remember that Sullivan's clinical material was frequently difficult of approach. His investigations were conducted not only at the bedside, but in public-houses and labourers' dwellings, in docks, factories and workshops; and it seems probable that his acute intellect, alert observation, unflagging industry and discerning judgment might have been less successful had they not been combined with a sympathetic understanding of human weaknesses. It can be truly said that in dealing with difficult cases he practised not only the science but also the art of his profession, and became en rapport with his patients with facility.

Apart from his work he had no particular hobbies, but-

"There is unspeakable pleasure attending the life of a voluntary student,"

and it is as an earnest student and seeker after truth, as an erudite sociologist and psychiatrist that he will be remembered. A man of steadfast purpose, personal charm and kindly manner, he commanded the affection of his colleagues and rivals. The writer of these lines remembers being present, in 1912, with the rejected candidate for the post of Superintendent of Rampton, at the house of a mutual friend, when Sullivan, whose appointment as such had just been confirmed, entered. Snatching obsolete weapons from their host's walls the successful and rejected candidate engaged in combat, to the delight of the onlookers and their own amusement.

He leaves a widow, herself a gifted writer, whose sympathy and interest in her husband's work was constant, and one son, who is Vice-Consul and Secretary to the Legation at Bagota, and who has been Charge d'Affaires and Acting Consul-General for some months.

W. N. E.

[Abstract of Obituary Notice by Raymond A. Dart, Dean of the Faculty of Medicine, Journ. of Nerv. and Ment. Dis., November, 1925.]

JAN MARIUS MOLL, M.D.

Ordinary Member since 1911.

Death has taken grievous toll of the medical profession in South Africa and of the psychiatrical staff in the University of the Witwatersrand in particular by removing from their midst the serene, distinguished and lovable figure of Jan Marius Moll. Born in 1879 in the town of Blumendal, at Meerenberg Asylum, Holland, he was reared in a psychiatrical atmosphere, for his grandfather was Superintendent and his father was a First Assistant there.

During his student days he gained the distinction of the Gold Medal of the University of Utrecht for his able embryological investigations. Illness demanded his leaving Holland for the more genial climate of Heidelberg, Germany, where he was appointed to the staff of a mental hospital. This determined his subsequent career, for under Nissl (Heidelberg), and later Dubois (Switzerland), the neurological training he had received under Winkler and Heilbronner at Utrecht bore fruit.

Fortunately for the high veldt of South Africa, the lure of her sunshine and elevation and the vista of her future appealed to him, and after taking an English qualification (L.S.A.) and holding an appointment at Long Grove Mental Hospital, Epsom, he joined the staff of the Westkopjies Mental Hospital, Pretoria, in 1911, where his abilities soon found expression. The classification of the patients was revised, routine laboratory examinations were systematized, and the present intelligence tests, adapted to South African needs, were introduced. He went to Johannesburg in 1915 as a Consultant in Mental and Nervous Diseases, and found

time for the thorough prosecution of his appointment as Medical Inspector of Schools, and worked out and applied a scale whereby the intelligence of the pupils could be measured. Subsequently, when the School Clinic was established, he was appointed Mental Expert for the Education Department, attached to this clinic, and busied himself vigorously with the whole matter of child welfare. He was also the expert applied to by the Juvenile Court concerning the mentality of delinquents. In 1918 he became Honorary Assistant Physician on the staff of the Johannesburg General Hospital, but in 1921, on a visit to Europe, his failing health broke down completely. He returned to South Africa in 1922 and was appointed Consulting Neurologist to the hospital, and in the following year became the first Lecturer in the newly founded Department of Psychiatry in the University of the Witwatersrand. But he never fully regained his strength, and he had not completed his first course of lectures when the insidious illness which daily dragged him lower overcame even his pertinacity. It is not given to many generations of students to witness the noble figure of a man, who was too weak to deliver his lectures standing and whom death had obviously claimed for her own, heroically and unconcernedly carrying on the ordinary duties of life.

Moll was largely responsible for the present position of psychiatry in South Africa. No vaunted cure was too drastic, none too far-fetched to be overlooked in the possible amelioration of mental distresses. He was the first to introduce practically every new and celebrated treatment for mental diseases in South Africa and to report on their results before medical audiences. He made intelligence tests and laboratory methods in psychiatry a commonplace in South Africa. It was largely owing to the initiative of Dr. Moll the importance of general psychiatric training of future graduates in medicine there is stressed to a degree, and regarded as ranking in value with any of the major divisions of medicine and surgery, and its study extends over considerably more than an academic year.

As a prolific and thoughtful contributor to literature, both the purely scientific and the eminently practical and clinical, he was well known to a wide circle of Colonial, European and American friends. He left his extensive modern library to enrich the libraries of the mental hospital and of the medical school. His loss will long be felt, and his kindly influence remembered amongst those who knew his genial and stimulating companionship.

J. R. L.

# THE LATE DR. PERCIVAL L. LANGDON-DOWN. [A Correction.]

The association of the late Dr. Percival L. Langdon-Down with Normansfield should have been stated to have been from 1900, not 1920 as given in our obituary notice on p. 161.

## NOTICES BY THE REGISTRAR.

FINAL Examination Results for the Nursing Certificate, November, 1925.

List of Successful Candidates.

Those marked • are "with distinction."

Cambridgeshire.—Hilda Collins, Nellie Dorothy Irons, Rhoda Winifred Prior, Albert Gentle.

Cheshire, Chester.—Herbert Alyn Jones, Edward Lloyd Tinsley, Edith Boswell, Jessie Louie Guy, Effie Jones, Mary Tynan.

Cheshire, Macclesfield .- Eva D. Gerecht.

Cornwall.-Harriet Matta, Winifred Weale.

Derby County .- Herbert Heath, John Pegg.

Devon .- Ivy Lilian Pridham.

Essex, Brentwood.—Josephine StClair, Mabel Musgrove, Violet Cranmer, William Charles Capon.

Hants, Knowls.—Cyril Ernest Eugene Hill, Edward William Leigh, Mabel Mary Eliza Bennett, Florence Mabel Cross.

Hants, Park Prewett.—Arthur Frederick Pink, Mollie Whelan, Gertrude Curtis, Dorothy Annie Lentall.

Kent, Chartham.-Mary Smith, Emma Maud Crowe, Florence Slow, Elsie Milsom.

Kent, Maidstone. -- John Frederick Bates Duffett, Albert Wynn, William Joseph Gilliard.

Lancs, Winwick.-Alexander Flanagan, \*William Joseph McCoy, Alfred Edgar

London, Banstead.-Laura Lesser, Edith Amelia Tyler.

London, Bexley. - Agnes Kinnersley, Muriel Hart, Elsie Smith, Emma Ratcliffe, Minnie Bishop, William James Dilley, James Morrissey, Stanley Maurice Smith. London, Cane Hill .- Maggie Campbell, Marion Cherry Creswell, Arthur John

Flanagan, James Patrick Flynn.

London, Claybury.—Julia M. Kelly, Sylvia A. Western, Jessie L. Hattley, Mary F. O'Regan, Martha T. Woodey, Hilda Mutimer, Johanna T. Wall, Agnes Pitt.

London, Colney Hatch. - Jannettea Elizabeth Millar, Gladys Amy Scott, \*Rose Morley, Annie Elizabeth Seymour, Edith Emily Lambert, Effie MacDonald, Mary Ryan, Lily Waters, Katie Cecil Smith, Walter William John Mann, Charles Frederick Isaac Smith, Alfred Charles Gabriel, Kenneth Charles Payne, Seymour Albert Thomas Buckingham, Frederick Henry Fitch, Harry George Feakes, Frederick Presswell, Robert Walter Daniel Day, Charles Edward Moule.

London, Hanwell.—Aubrey C. Greening, Frederick G. Higgins, Elizabeth Goode, Emily A. Rose, Minnie H. Barnett, Ellen E. McAndrew, Maud E. Cockram, Ethel R. M. Hamer, Eliza F. Payne.

London, Horton.-Dorothy Mary Price, Mary Cain, Violet Alice Pullman.

London, Long Grove.-Henry Castor Feaver, Christopher John Penfold, Thomas Edward Spicer, Ivy Marguerite Barter, Jane Emily Bird, Daisy Evelyn Carter, Ethel Davis, Kate Pattison Potter, Mabel Alice Satchwell, Irene Annie Spetch.

London, Maudsley.—Eileen Foley, Harriett McGovern, Jane M. Cottrell, \*Joyce V. Williams, Agnes Henson, Irene Robus, Elizabeth Halligan, \*Winifred Waite, George Feaver, Henry Budden.

London, West Park, Epsom.—Constance Russell, \*Susan Mary Parkinson.

Middlesex, Napsbury.—Ernest Maybank, William Cooper, Frederick William Banfield, Charles Archer, Herbert James McDonald, Edward Albert Nightingale, Leonard Oliver.

Middlesex, Springfield.—Thomas Arthur Mannering, Archibald Harvery White, George Edward Townsend, Reginald Blake, Edward Austin Chamberlain, Albert Fry, Sidney Chas. Adcock, Albert Frederick Compton, William George Kingshott, Sydney Arthur Webber, Gladys May Orrick, Elsie Domone, Lily Victoria Sprouting, Alice Ada Morris.

Norfolk.—Catherine Rich, Lena Cook, Miles John Fish.

Northants.—Henry Collins, Joseph Hollingsworth, Frank Speight.

Northumberland.-Maud Seabourne, Elizabeth Dean, Mary Ann Olsen, May Alderson.

Notts, Radcliffe.—Alfred Lawrence Todd, Mary Barratt, Gladys Mary Fisher Ethel Blankley.

Oxford, Littlemore.- Edward Charles Parker.

Somerset and Bath.—George Bennett, Ronald Arthur England. Staffs, Burntwood.—William Henry Allman.

Suffolk .- Frederick S. Leech.

Surrey, Netherne .- William Grimshaw.

Sussex, Graylingwell.—Winifred Mary Clare, Catherine Munro, Harriett Josephine Lathlain, Ethel Coles, Susan Fitzjohn, Edna May Fisher, Hilda Adelaide Silver.

Sussex, Hellingly.—Gladys May Smith, Celia Millicent O'Dell, Annie Josephine Drury, \*Nellie Griffiths, James Laird Cumming, John George Hill, Francis George O'Sullivan.

Wilts .- Garrett Henry Buckle, Frederick Albert Genever, Howard Victor Weston.

Yorks, Beverley.—Fred Butler, Harold Constable, Margaret Monahan, Mary Doris Vickers, Ellen Elizabeth Mallon.

Yorks, Menston.-Wilson Haigh, John Clarke Miller, James Shaw, Lawrence W. F. Dale, Walter Thornton, Gertrude Skerratt, Emily Weightman.

Yorks, Wakefield.—Nora Adams, Martha Roberts, Elsie Shires, Alfred Calton. Percy Gibson, George Wilfred Harris, Gilbert Ellis Linford, John Herbert Ward, Cyril Wright.

Birmingham, Rubery Hill .- Thomas Nichols, Minnie James, Hilda Mary Abell, Gladys Rowley, Annie Alice Modwena Lewis, Lilian Edith Hollis, Edward Frederick Eaton, Joseph Thomas Franks, George Henry Hunt, Arthur Halfpenny.

Birmingham, Winson Green.—Evelyn Standing, Vera Rixon, Edward S. Greenway, William George Williams, Alfred Hipkiss, William Fitchew, Bernard Heeley, Ernest J. W. Moody, Michael Casey, Harold C. Stephens, Thomas Galloway.

Brighton.—Albert Arthur King, George Felix Marchant.

Bristol .- Elsie M. Bailey, Beatrice A. Norris.

Cardiff .- Gladys Threadgold, Susie Alfred.

Exeter.-Reginald Rose.

Hull .- Florence Houston.

Middlesborough.-Hannah Douglas.

Newcastle-on-Tyne.—Sarah J. Weedon, Thomas D. King.

Norwich City.—Harold Lionel Jackson Eagles, \*Herbert Leslie Moore, Edward John Pointer, Reginald Powell, Norah Williment.

Nottingham City .- Jennie Hall, Amelia Garrett, Harriett Ellen Walker, Annie Johnson, Leonard Arthur Pope.

Sunderland.—Thomas Goodings, Kathleen Sams, Jean Graham.

York. - Samuel Houldsworth Cartwright, \* Ethel Day, Dorothy Martha Hughes.

M.A.B., Tooting Bec.—Henrietta M. Baker, Catherine Sully, Ellen M. Livingstone, Doreen Parker, Frederick Crouch, George Steven Hurring, Henry Edward Shelly, Percy Whiddett, Frank Wilding, William George Mercer, William H. Hutchins, Lily Irene Champion.

Bailbrook House .- Ada Elizabeth Curthoys.

Bethlem Royal.—Brenda Mabel Boon, May Tottman.

Brislington House.-Millicent Clarice Newth, Rosa Jean Searle.

Coton Hill .- Charity Jewel Derry.

"D" Block, Netley .- Alfred Edward Smallman.

Ticehurst House.—Catherine McCarthy.

Warneford .- May D. MacGeorge, K. Edwards, M. Iles.

Aberdeen City.-Magdalene Milton, Jessie Innes.

Aberdeen Royal.—Helen Deane Robertson. Crichton Royal.—James Findlay, Agnes Patterson, Jemima Penny Scott, Isabella C. Begg, Florence Eileen Hawkley, Mary Teresa Fenton.

Edinburgh, Craig House.—Elizabeth Jamieson, \*Euphemia M. Ross, Susane Evans, Jessie Ferguson, Elizabeth Jamieson, \*Bella Moggie, Annie McAvoy, James McLaren.

Edinburgh District.—Isabella Anderson, Janet Milne Balharrie, Rosemary Cecilia Butlin, Ellen Hannan, Rose H. N. Middleton, Emily Murray, Margaret Neil, Maggie Grace Robertson, Edith Stewart, Elizabeth Woods, Margaret H. Drummond, James Donaldson Hood, Robert Garioch Sinclair.

Edinburgh Royal.—Alexander Smith, John Currie, John Nicolson.

Gartloch.—Mary Barr, John McMillan. Glasgow Royal.—Gilbert McFadyen.

Glasgow, Woodilee.-Kate McLean Smith, Agnes McCluskie, Jane Ferguson Borrowman, Agnes McArthur Howie, Christina Maria McFaddin, Bertha McIntyre, David Campbell.

Greenock.—Clara Sophia Livingstone, John Harkin.

Inverness.—Catherine Hardie, Maggie Budge Milne Beattie, Mary Anne Jane Cameron.

Lanark.—Catherine Dobson MacLeod.

Montrose.—\*Annie Ogg, Mabel Gourlay, Mary Webster, Clara Green.

Riccartsbar.- James Symon, Alexander Kellas, Isabella McArthur.

Rozburgh. - \* Robina Munro.

Stirling .- Marion Anderson, \*Ann Clark McLennan, Mary MacLean, Mary McGrody.

Belfast.—Florence May Matchett.

Dublin, Grangegorman.—Patrick J. Murphy, John Doyle, Anne Morris, Sarah Higgins, Esther Kerrigan, Margaret Browne, Mary Mulligan, Mary Alice Rooney. Dublin, Portrane.-Kate Molloy, Margaret Hassett, Kate McMahon, Owen

Mullingar .- Bridget Garry, Ellen Mulhearns.

Omagh.—Rose McSorley, Jane Lynch, \*Eileen Smith, Annie Gorman, Robert Ewing, Herbert Armstrong.

South Africa, Bloemfontein.—Daniel Nicholas Rudd, Catherina Lavinia Holliday, Johanna Aletta Ferreira.

South Africa, Fort Beaufort.—Christina Wilhelmina Barnard. South Africa, Grahamstown.—Florence Matilda Pienaar.

South Africa, Pictermaritzburg.—Ernest Campbell Linscott, \*Winifred Alexandra Cooper, Esther Margaret Homan, Evelyn Dorothy Woolley.

South Africa, Pretoria.—Cornelia Carolina Bezuidenhout, Edward Charles Connally, Daniel Jacobus Robbertse, Andries Lukas Jacobus Van Jaarsveldt.

South Africa, Queenstown.—Alletta Francina Jooste.

South Africa, Valkenberg .- Edwina Carstens, \*Gabriel Conradus Van der Walt, Christian Jacobus Marais, Ernest James Brown, Alan James Heath.

South Africa, Witrand.—Hannah Hay.

Federated Malay States .- Kesari Rai.

#### NURSING OF MENTAL DEFECTIVES CERTIFICATE.

Calderstones.—Valentine Kelly, Ada Rickards, Harriett Newall, Thomas Bulcock, Hector Murray, Arthur William Richardson, Francis Michael Kelly, Maurice Camm, James Edward Farrell, Walter Ellis, Herbert Cyril Snook, Frank Bishop. M.A.B., Darenth.—Lilian M. James, Margaret Marsh, Rosalind Moyes, Margaret

Rose Moss, Dorothy Blaxland, William Christie.

M.A.B., Leavesden.-Winifred Mary Arnold, Phyllis Josephine Gower, Alice Maud Leach, Dorothy Alice Tulley, Phyllis Louisa Mary Wilson, William Billing. Stoneyetts Institution.—Alexander Beattie, Isabella Kemp, Elizabeth Brown, Jeanie Brown, Mary Malcolm Bauld, Betty Barrowman, Margaret McMahon, Jessie McLeod.

The Manor, Epsom.—Norman Dalziel, Frederick Dell Chambers, Sybil Holmes,

Olive Ashford, Rosa Mary Bull, \*Gladys McKay, Alice Bellamy.

South Africa, Alexandra Institution.-Alice Hall, Ann Elizabeth Petronella Cloete, Dorothy Rachel Coetzee, Jacoba Susanna Groenewald.

## NAMES OMITTED FROM MAY, 1925. RESULTS.

Bootham Park. - \*Mary Elizabeth Anderson, \*Jeannie Henderson.

## NOTICES OF MEETINGS.

Annual General Meeting .- July 12-19, 1926, in London.

Quarterly General Meeting .- May 18, 1926, London (Maudsley Lecture).

South-Eastern Division .- April 1, 1926, at St. Andrew's Hospital, Northampton. South-Western Division .- April 29, 1926, at the Bristol City Mental Hospital. October 28, 1926, at the Hereford City and County Mental Hospital.

Northern and Midland Division .- April 29, 1926, at the Gateshead Mental Hospital.

Scottish Division .- May 14, 1926, Stirling District Mental Hospital, Larbert. Irish Division .-- April 22, 1926, at St. Patrick's Hospital, James's Street, Dublin.

#### APPOINTMENTS.

BEDFORD, P. W. P., M.D.Edin., Medical Superintendent, Dorset County Mental Hospital, Herrison, near Dorchester.

DEVINE, HENRY, M.D., F.R.C.P., Medical Superintendent, Holloway Sanatorium, Virginia Water, Surrey.

HANCOCK, A. C., M.C., M.R.C.S., L.R.C.P., Deputy Medical Superintendent. Horton Mental Hospital, Epsom.

MOODIE, W., M.D., M.R.C.P., Deputy Medical Superintendent, The Maudsley Hospital.

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# JOURNAL OF MENTAL SCIENCE.

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# THE JOURNAL

OF

SEP 13 1926

# MENTAL SCIENCE.

## EDITORS

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and to Messrs. Adlard & Son & West Newman, Ltd.

Published Quarterly, price Seven Shillings and Sixpence net; or Thirty Shillings per annum net. The following Mental Hospital Reports for the year 1925-1926 have been received:

Cheshire County, Parkside. Down County. Glasgow Royal. The Lawn, Lincoln.

Also the following Reports and Reprints:

The Lebanon Hospital: Report for 1924-25.

Annual Report for the Mental Hospitals in Bengal, 1924.

Mental After-Care Association: Report for 1925.

Post-Malarial Condition of the C.P.F., by Drs. Nicole and Steel.

Hyoscine in Post-Encephalitis Lethargica, by Drs. McCowan and Harris and Mr. S. A. Mann, B.Sc.

Blood-sugar Studies in Post-Encephalitis Lethargica, by Drs. McCowan and Harris and Mr. S. A. Mann, B.Sc.

Psycho-analytic Improvisation and the Personal Equation, by Dr. T. Burrow.

The Laboratory Method in Psycho-analysis: Its Inception and Development, by Dr. T. Burrow.

The Employment of Male Nurses in the Male Wards of Mental Hospitals in Scotland, by Prof. G. M. Robertson.

## Books received for review:

A Psychological Study of Immigrant Children at Ellis Island, by Dr. Bertha A. Boody.

The Purposes of Education, by StGeorge Lane Fox Pitt. Migraine and other Common Neuroses, by Dr. F. G. Crookshank.

The Child, the Clinic and the Court-a Group of Papers by Various Authors.

Clinical Examination of the Nervous System (3rd edition), by Prof. Monrad-Krohn.

Psychopathologie Sociale, by Dr. Henri Damaye.

Pathology, Diagnosis and Treatment of Functional Nervous Diseases, by Paul Bousfield, M.R.C.S., L.R.C.P.

Mental Diseases-Catechism Series, published by Livingstone, Edinburgh.

Epilepsy—a Functional Mental Disease, by Dr. R. G. Rows and W. E. Bond.

Spiritism—the Ghost Cult, by H. Ashton Lilburne.

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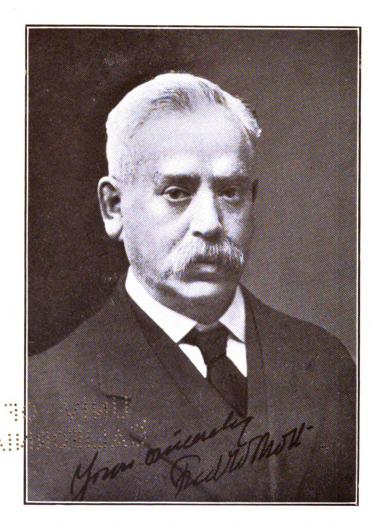
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Born October 23, 1853. Died June 8, 1926. President, 1925-6. Ordinary Member since 1896.

## THE

## JOURNAL OF MENTAL SCIENCE

[Published by Authority of the Royal Medico-Psychological Association.]

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We mourn to-day the loss of a great leader in science and medicine, but we rejoice at the same time in the work that he has accomplished for science and for mankind; and it seems fitting that in this our service of commemoration we should call to mind the achievements which have not only raised him to be foremost among neurologists, but have put all humanity in his debt. Sir Frederick Mott was one of the select few who receive early their call to service in the temple of science, and who, responding to the call, are willing to sacrifice all in the pursuit of knowledge and in the fight against the ignorance and impotence which keep our world in bondage.

Mott took up research as the serious business of his life as soon as he had completed his medical studies at University College, London, in 1881, and became at once associated with a small band of workers, among whom were Horsley, Schafer and Beevor, who were actively engaged in elucidating by the experimental method the functions of the brain. The researches of these men were advancing our knowledge so rapidly that at that time neurology seemed to be a specially English science. It was probably the influence of these early associations that aroused in Mott his keen interest in the mode of working of the central nervous system and determined the direction of his life's work.

In 1883 Mott was appointed Assistant Professor of Physiology at Liverpool, but returned to London in the following year as Lecturer on Physiology at Charing Cross Hospital Medical School,

<sup>(1)</sup> An address written by Prof. E. H. Starling, C.M.G., D.Sc., M.D., F.R.C.P., F.R.S., and delivered by him at the Memorial Service held at the Church of St. Martin-in-the-fields, Charing Cross, London.

a post which he held—later in conjunction with a position on the medical staff-until 1899. During this period he had to superintend the building and organization of the new laboratories in Chandos Street, but his duties as teacher, as organizer of courses, and later in charge of patients, were not allowed to interfere with the main work of his life, namely, the investigation of the functions of the central nervous system. During these years his most important contribution related to the functions of the parts of the brain concerned with vision, and this subject continued to occupy his attention up to the end of his life, and to undergo at his hands continuous development. The localization of the sense of vision in the brain necessarily led on to the consideration of the parts of the brain involved in the higher visual processes, and the association of these with the impressions from other sense-organs and with the motor reactions which ensued. He was one of the first to appreciate the great part which has been taken in the evolution of the human brain and of the intellectual powers of man by the development of binocular vision, and the correlation between vision and the movements of the hands which became possible when the forelimbs were no longer required for locomotion. Throughout this early work we see a gradual turning of Mott's attention and interest from the lower to the higher functions of the brain, and an increasing preoccupation with the brain as the organ of mind and with the dependence of the higher mental processes on the structural and functional conditions of the brain itself. His growing interest in disordered conditions of mind was probably stimulated by his appointment as Physician at Charing Cross Hospital, and the opportunities he thus obtained of observing different forms of mental disturbance—the temporary condition of insanity due to poisons, such as alcohol, those which are certainly due to infection, and the more lasting conditions which may find their way into a general hospital before being hidden away in an asylum. Thus, when the London County Council, in 1895, created the post of Pathologist to all the asylums under their charge and built a laboratory at Claybury in which this work might be carried out, Mott was the one man in England fitted by training, temperament and achievement for the post, and when the place was offered to him he accepted it joyfully, even though it involved material sacrifice and the acquiescence in many conditions which seemed irksome. him it was the opportunity he desired, since it enabled him in future to devote the whole of his attention to the investigation of the causes of insanity. The main questions which he had to study had long been in his mind: What parts in the production of this disorder were played respectively by heredity and by environment,

or, as he generally chose to say, by nature and by nurture? What forms were due to infection? What to poisons introduced from without or produced in the body itself as the result of disordered function of its various organs, especially those concerned with internal secretion? And finally, what forms had their origin in faulty development? In this way he might learn what kinds of insanity were preventable and what could be cured, while light might be thrown on methods of treatment of every type, whether preventable or unavoidable.

The record of Mott's chief work for more than a quarter of a century, together with that of the younger men working under his inspiration, is in the Archives of Neurology. Much of the research carried out, first at Claybury, and later in the laboratory of the Maudsley Hospital for Mental Diseases at Denmark Hill, lays the foundation on which other workers must build. I would here only summarize briefly those researches which form notable achievements in the science of medicine and permanent gains to our powers of control of mental disorders.

The first, and probably greatest, of these was the definite proof that general paralysis of the insane was due to infection and was part of a general disease, and had nothing to do with nervous inheritance or with the strains and stresses of an over-active life. In this way was removed the disability previously attaching to descendants of a general paralytic, and the disease itself entered into the domain of those which are preventable, and possibly, with further research, susceptible of cure. For this disease, as for another—locomotor ataxy—infective origin had already been guessed, but it was Mott's merit to have for the first time put the matter beyond further question.

Another subject which was forced on his attention in consequence of his close association with the work of the asylums was the prevalence of what was known as "asylum dysentery." Investigations on this disease carried out under Mott's direction convinced him that it was not a necessary condition of asylum life, but was due to the neglect—sometimes unavoidable—of precautions which should be taken in dealing with any case of infective disease. He pointed out that the conditions of its spread were identical with those of typhoid, and the introduction of the measures suggested by him led at once to a marked diminution of the prevalence of this disorder.

The outbreak of the war brought a further problem for solution, namely, that of shell-shock, and patients suffering from this disorder were collected under Mott's care, so that he had the fullest opportunity for their investigation. A careful study, pathological and clinical, enabled him to divide the cases into two categories—those in which there was an actual mechanical injury due to the

physical effects of an explosion, and those in which the cause of the disorder lay on the psychical or emotional plane, and the disease represented a functional breakdown of a nervous system not sufficiently stable or healthy to withstand the stresses and strains to which men were subjected in the perils of the trenches. This delimitation of the causes of shell-shock rendered it possible to decide not only as to the prognosis of any given case, but also as to the best methods of treatment.

Since the war Mott's chief attention had been given to the question of the insanity of youth, known as dementia præcox. In his masterly papers on this subject he has shown beyond cavil that we are dealing here with a disorder of development, in which that great source of the chemical factors influencing development, namely, the sexual glands, and the highest and most lately developed parts of the brain undergo simultaneous retrogression and decay.

Time does not allow me to deal adequately with many of Mott's other activities, both within and outside his work. I would only mention his masterly analysis of the part played by alcohol in the causation of insanity, his examination of the influence of the internal secretions on the development of the mental functions, his advocacy of mental hospitals for the treatment of early cases of disordered mind, his interest in eugenics and the reduction of feeble-minded stocks. Inspired by his keen interest in music, he made notable contributions to the physiology of speech and song, and the value of this work to musicians was signalized by his election as President of the Society of English Singers.

Nor have I said anything of the man himself. His personality is too fresh in our minds to need calling to remembrance, but his scientific achievements would have been impossible but for certain qualities inherent in his character. Single-hearted in his search after knowledge and in his devotion to science, he was free from that prejudice and that type of vanity which makes a man adhere to some view he has previously associated with himself. natural, therefore, that his advice, not only on questions connected with the central nervous system, but on all points of difficulty, scientific and otherwise, was greatly sought by his colleagues, There was no man freer from envy or fuller of generous admiration for the work of other men. So our prevailing feeling to-day must be thankfulness for his life and his work, and though we regret our loss, we must not sorrow overmuch that he has laid down his task and secured rest from his labours while in the plenitude of his powers and with his mental vision still undimmed, at a moment when the main objects which he had set himself to carry out were in full course of accomplishment.

## Part I.—Original Articles.

The Oculo-cardiac Reflex; its Clinical Significance. By R. D. GILLESPIE (1), M.D., D.P.M., C. P. RICHTER, Ph.D., and G. WANG, Ph.D. (From the Psychological Laboratory, the Henry Phipps Psychiatric Clinic, Johns Hopkins Hospital, Baltimore.)

The rôle played by the vegetative nervous system in disease is as yet uncertainly defined, and the increasing interest in its functions has led to a search for convenient indices of its activity. Among the tests of the latter the oculo-cardiac reflex, first described by Dagnini and by Aschner, has been accorded a prominent place, especially by French investigators. The reflex consists chiefly of an alteration in heart-rate (usually a slowing) produced by pressure on the eyeballs. The nervous path of the reflex is still a matter of discussion. A distinct slowing is supposed to indicate a preponderance of vagal influence in the vegetative nervous system.

There is no very general agreement as to the value of the reflex. Santenoise (1) considers the oculo-cardiac reflex a "précieux moyen" of investigation of the sympathetic nervous system, but Laignel-Lavastine (2) points to the danger of inferring the state of the whole organism from that of one reflex. Similarly, Mosler and Wehrlich (3) remark that one cannot speak of a general vagotonia from the presence of a "positive" oculo-cardiac reflex which occurred to a significant extent in only a minority of "vagotonic" cases. Alchieri (4) thinks that its value is over-estimated by some and under-estimated by others, but that rightly interpreted in conjunction with other data it may sometimes be useful. Santenoise (1) finds a constant relative increase in the reflex in certain periodic psychoses, while Perrin and Yovanovitch (5) remark that the reflex occurs in such diverse conditions that as an index of vagal excitability it can have only a very uncertain significance.

It is evident that there is much doubt whether this reflex, which has been so much talked about lately ("hunted to death" as a German reviewer lately remarked), can be considered to have any special value. Much of the confusion probably depends on uncertainty as to what constitutes a normal reflex. Barré and Crusem (6) criticize the general belief that a reflex slowing of more than 8 or 10 beats is abnormal, and point out that the normal variation in the pulse-rate from minute to minute may exceed 8.

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They would extend the normal limit to 12. Laignel-Lavastine regards a slowing of more than 12 as indicating "vagotonia," of 4 to 12 as normal, and of less than 4 as indicating absence of the reflex. In the latter condition and in cases where acceleration occurs instead of slowing he speaks of "sympathicotonia."

A point of interest is the relation of the reflex to the emotional condition of the subject. Usually the status of the reflex has been considered only in relation to a given symptom-complex, but the relation to the emotional part of that complex should be equally interesting. We are still without any reliable objective indication of affect, and since a relation between the sympathetic nervous system and certain emotional conditions has been demonstrated (Cannon), it might reasonably be expected that the oculo-cardiac reflex, if it be a reliable measure of the vago-sympathetic balance, would furnish useful corroborative data as to the emotional condition as well.

The objects of our experiments were as follows:

- 1. To study the variation, if any, that might occur in the reflex from time to time.
- 2. To estimate the amount of reliance that might be placed on a given reading.
  - 3. To observe the reflex in certain emotional conditions.

## METHODS.

Observations were made on a group of subjects at approximately three-hour intervals throughout the day, from 8 a.m. till about 8 p.m., and were so arranged that at least an hour elapsed since the preceding meal.

For the pressure on the eyes necessary to elicit the reflex a modified "oculocompressor" (similar to that described by Roubinovitch (7)) was devised.

The pulse-rate was in most cases simply counted at the wrist, but in a number of subjects electro-cardiographic records were made in order to have the conditions as objective as possible. The results obtained were treated statistically in order that their reliability might be assessed.

## VARIABILITY OF THE REFLEX.

Twenty-two cases were observed over several days as above. The minimum and maximum values of the reflex obtained in each case during the period of observation differed by as much as 20 beats within three days in the same subject. The maximum difference was in most cases in the neighbourhood of 10 beats.

Diurnal variation in the reflex.—There is no regular diurnal variation in the reflex. It appears to vary in an irregular manner. This was borne out by electro-cardiographic records made on several subjects at 2-3-hour intervals through the day (from 7 a.m. to 7 p.m.), which showed that maximum and minimum daily readings occurred at widely different hours in the same patient.

## RELIABILITY OF INDIVIDUAL READINGS.

Statistical methods and results.—In each case (21 patients) the mean resting pulse-rate was calculated from readings taken at 2-3-hour intervals during the day for three days. (Even more numerous readings would have been desirable for statistical inferences.) The mean rate under ocular pressure (the pressure being identical on every occasion) on the same occasions was also calculated. The probable error of each mean (given by the formula

 $P.E. = \frac{.6745\sigma}{\sqrt{n}}$ , where  $\sigma =$  standard deviation, and n = number of cases) was then calculated, and from the probable error thus obtained, the P.E. of the difference between the means was obtained by the formula—

$$E_{A_1} - E_{A_2} = \sqrt{(P.E._{A_1})^2 + (P.E._{A_2})^2}.$$

The reliability of the figure obtained for the average value is then simply calculated from the Kelley-Wood (8) table.

In 11 out of 21 cases the change in heart-rate resulting from the ocular pressure was found to be of no significance whatsoever. Yet in these cases a single reading could show a slowing of as much as 8 per min. (Dg.) and an additional reading or two showed similar differences.

The necessity of multiplying readings, where the results are so variable even in a single case, seems to be sufficiently demonstrated.

## TECHNIQUE OF ELICITING THE REFLEX.

With regard to the technique of eliciting the reflex, electrocardiographic records were made with (a) very brief pressure on the eyeballs (as it would obviously be desirable to avoid the discomfort of prolonged pressure), and (b) various degrees of prolonged pressure. Since, from the results of section (b), it appears that several readings ought always to be made at a time if there is to be any hope of even approximate accuracy, the time necessary for the results of pressure to pass off was also observed. From the results obtained it appears that (I) short sudden pressures fail to stimulate; (2) in continued pressure, the slowing is greater as a rule with greater pressure; (3) the cardiac rate returns to normal in the majority of the instances observed within 20 seconds of the release of pressure.

RELATION OF THE OCULO-CARDIAC REFLEX TO EMOTIONAL (AFFECTIVE) CONDITION AND TO REACTION-TYPE. (+ indicates a case with obvious variability of affect.)

Subject.	Type of affect.	Variability of affect.	Reaction-type.	Average value of reflex.
Ma.	Anxiety + depression	+	Anxiety depression	3.47
H.	Depression	••	Schizophrenia	7.4
Ca.	Elation	••	Hypomania	4.2
Gd.	Depression	••	Simple depression	3.0
В.	Elation	••	Schizophrenia	0.95
Co.	Depression	+	Depression (retarded)	0.6
Mi.	Elation	+	Epilepsy	2.2
Du.	Elation and irritability	+ + +	Hypomania	2.0
Bu.	Depression	••	Simple depression	3.4
Ba.	Elation and depression	+	Manic-depressive	3.2
R.	Anxiety and depression	+ +	Anxiety depression	2.6
Bd.	Depression	••	Simple depression	1.0
Dg.	Depression	••	Paranoid state	0
S.	Depression	••	Schizophrenia	1.2
Dc.	Elation + irritability	••	Hypomania	1.6
В.	Depression	••	Depression	2.3
S.	Apathy		Schizophrenia	3.5
K.	Depression		Simple depression	0
В.	Elation		General paralysis	0
H.	Apathy		Schizophrenia	0

No relation can be observed in these figures between (a) magnitude of the reflex and the mood-type, (b) variability of the reflex and of mood, (c) variability of the reflex and mood-type, (d) magnitude of reflex and reaction-type.

## Conclusions.

- I. One or two estimates of the reflex are of little significance, and may actually be misleading.
- 2. The reflex is often very variable in the same individual; and it tends to vary in an irregular manner throughout the day from day to day.
- 3. Values up to 3 (or more), even if obtained from a considerable series of readings, are often of no significance.
  - 4. For eliciting the reflex, prolonged pressure is more reliable

than brief pressure. The reflex passes off in the majority of cases within 20 seconds of the release of pressure. The reflex slowing is roughly proportional as a rule to the amount of pressure exerted.

5. No relation was observed in our series of cases between the magnitude of the reflex and the prevailing mood, or between the variability of the reflex and the type or variability of the mood.

We are indebted to Prof. Adolf Meyer, Director of the Phipps Psychiatric Clinic, for permission to make the above observations.

(1) Santenoise, Presse Méd., 1923, xxxi, p. 375.—(2) Laignel-Lavastine, Gaz. des hôp. civ. et milit., 1924, xcvii, p. 199.—(3) Mosler and Wehrlich, Zeitschr. f. Klin. Med., 1921, xci, p. 190.—(4) Alchieri, Arch. de patol. e clin. Med., 1922, i, p. 194.—(5) Perrin and Yovanovitch, Rev. Méd. de l'Est., 1923, li, p. 778.—(6) Barré and Crusem, Ann. de Méd., 1921, x, p. 303.—(7) Claude and Santenoise, G. R. de la Soc. de Biol., 1922, lxxxvii, p. 1112.—(8) Keiiey-Wood, Statistical Methods, 1923.—(9) Roubinovitch, J. Nerv. and Ment. Dis., July, 1920.

The Variability of the Blood-pressure in some Morbid Conditions.

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BLOOD-PRESSURE IN ITS RELATION TO EMOTIONAL DISORDERS AND MENTAL DISEASES.

OBJECTIVE criteria of emotional states, especially those occurring in mental disorders, are continually being sought. There is at present a tendency, especially in France (cf. the work of Santenoise and Reboul-Lachaix), to find in somatic conditions reliable indices of the emotional status of the individual. In investigating possible relations between blood-pressure and the emotions, both in normal and abnormal individuals, three questions arise, viz.:

- (I) Whether one or two readings in the day of the blood-pressure are reliable samples of the prevailing pressure;
- (2) Whether, corresponding to qualitative differences in emotional conditions, there are quantitative differences in the blood-pressure.
- (3) And whether in the long-standing emotional alterations occurring in mental disorders this correspondence also occurs.

That the blood-pressure in a given individual tends to vary with his emotional state is of course well known. Thus Schrumpf (1) remarks that the tendency of the blood-pressure to rise suddenly and for a short time is especially marked in the nervous and emotional, and that it chiefly affects the systolic pressure, leaving the diastolic pressure unchanged, except in cases of arterio-sclerosis,

where both are affected to the same degree. This refers to the lability of blood-pressure in a given individual. It is a further question, however, whether the continued presence of a morbid emotional state is accompanied by a continued elevation or depression of the blood-pressure above or below the normal. This question Craig (2) has answered in the affirmative, and has asserted that in the condition which he classifies as "melancholia" the blood-pressure is usually higher than normal, and in those classified as "mania," usually below normal. Faught (3) gives contrary results, stating that in "mania" the systolic blood-pressure and the pulse-pressure are increased during the period of restlessness, and that in "melancholia" the systolic pressure and the pulsepressure are normal.

In evaluating these divergent results, it is necessary to remember that the classification adopted may not have been the same, and to consider the first assumption mentioned above, viz., that one or two readings of the blood-pressure are representative of the value that commonly obtains.

In this connection, Janeway (4) quotes an instance in a normal subject, where a daily oscillation of as much as 60 mm. was recorded. Erlanger and Hooker (5) state that the pulse-pressure tends to increase in normal persons throughout the day by steps, a step occurring after each meal.

## PRESENT EXPERIMENTS.

It was thought that it would be useful to discover what were the variations in systolic and diastolic pressure that occurred from hour to hour and from day to day; and to what extent accordingly only one or two readings might be accepted as reliable indications of the usual value. Further, the possible relationships between blood-pressure and its variations and with various conditions such as behaviour, mood and type of disorder were studied.

## LITERATURE.

The literature in pathological cases is summarized by Wexburg (6), and he concludes that the only established finding is that in states of emotional depression there is frequently a tendency to a rise in blood-pressure, which is perhaps the physiological correlate of the affect. He believes that it is possible that the variability of the blood-pressure which is emphasized by some (Enebuske (7), Beaudouin (8)) may account for the discrepancies between the results obtained by various writers. Morgenthaler (9), for example, found a considerable variation in the blood-pressure from day to day (and in a few cases in the course of the day). Enebuske also observed changes in the blood-pressure from day to day, and considered that the variability of the blood-pressure mirrored to some extent the variability of the symptom-picture. Beaudouin likewise observed (in a minority of cases) a variation from day to day.

Three groups of subjects have been observed:

(a) A group showing obvious depressive affect (23 subjects);
(b) a group not specially characterized by a prevailing affect, and belonging to the schizophrenic type of reaction (15 subjects);
(c) a group of subjects with organic nervous disease (9 subjects).

## METHODS.

The blood-pressure (systolic and diastolic) was taken by the auscultatory method with a Tycos sphygmomanometer at intervals of two to three hours throughout the day, from 8 a.m. to 8 p.m. Each subject was observed over periods of from three to six days. The Tycos instrument was calibrated at intervals against a mercurial manometer. The readings were made with the patient always in the same position (recumbent or sitting), as the case might be, and the subject had about five minutes' rest in the given position before an observation of the pressure was made.

## DIURNAL VARIATION IN BLOOD-PRESSURE (GROUP A).

From the results it was evident that a considerable daily variation in both systolic and diastolic pressures occurred in these subjects. The mean variation of systolic pressure was in one case as high as 19.6, or 13% of the highest daily average pressure in this subject. The mean variation in diastolic pressure in another subject was 13.9, or 13% of the highest average diastolic pressure observed in one day in the same subject. It is noteworthy that the diastolic pressure showed a considerable variation in nearly all cases, and that accordingly a given reading was not necessarily a more reliable index of the prevailing conditions than is a single reading of the systolic pressure.

The maximum variation in a single day ranged from 16 to 52 mm. in the case of the systolic pressure, and from 18 to 37 mm. in the case of the diastolic.

# Variations in Blood-Pressure Readings on Successive Days (Group A).

In a few cases the readings obtained tended to diminish on successive days, and with this diminution the mean variation might also diminish. Morgenthaler (9) attributed the initially greater

pressure to lack of habituation to the procedure on the part of the patient. This phenomenon was observed in only a few of our subjects.

The average systolic pressure for one day differed from the average for another by as much as 33 mm. in one of the patients, and in the majority of cases there was a difference of 10-15 mm. between the highest and lowest average over the period of observation. Similarly the average diastolic of one day may differ from that of another day by 22 mm. (in an exceptional case), and in general by 5-10 mm.

The greatest difference between any two readings over the period of observation, in the case of the systolic pressure, was 56 mm., and in the case of the diastolic pressure, 46 mm.

Hour at which readings are taken.—In view of the variations that may occur in blood-pressure in the course of a single day, it might be thought possible to obviate the necessity for several daily readings if the pressure were observed at the same hour each Unfortunately as there is great variation in the curves obtained on different days at the same hour.

## DIURNAL VARIATION IN BLOOD-PRESSURE (GROUP B).

In Group B the mean daily variation in systolic pressure ranged from 3.0 to 14.5, or 9% of the highest daily average, and the mean variation in diastolic pressure from 2.2 to 12.2, or 20% of the highest daily average diastolic pressure recorded in the subject concerned.

The maximum difference in a single day varied from 22 to 54 in the case of the systolic pressure, and from 16 to 36 in the case of the diastolic pressure.

## VARIATION ON SUCCESSIVE DAYS (GROUP B).

It appeared in this group that the average systolic pressure of one day might differ from that of another by 25 mm., and more usually by 5-10 mm. There was less variability on the whole in this group from day to day than in Group A. The average daily diastolic pressure varied by as much as 33 in an exceptional case, and more usually by 5-10 mm.

## VARIATION ON SUCCESSIVE DAYS (GROUP C).

This group as a whole showed a variability in pressure very similar to Group A.

Epidemic encephalitis.—In Group C the variation in systolic

blood-pressure was as much as 26.2 in one case of epidemic encephalitis and in another patient with epidemic encephalitis only 5.9 at a maximum. The difference in these two cases was much less marked in diastolic pressure, the first-mentioned showing a daily mean variation, at the most, of 14.3, and the latter of 11.3.

General paresis.—A paretic showed a systolic mean variation as high as 15.6 on one day, while the highest diastolic mean variation was 6.0. Another paretic afforded similar figures, but a third showed a mean systolic variation of less than half that of the first two.

Cerebro-spinal syphilis.—A cerebro-spinal syphilitic showed mean variations, systolic and diastolic, of approximately the same magnitude as those of the first two paretics.

Arterio-sclerosis.—An arterio-sclerotic showed a systolic mean variation of as much as 12.5 in one day, and a diastolic mean variation in another day of 9.8.

Epilepsy.—An epileptic gave very similar results.

Schizophrenic reaction.—A patient with a schizophrenic reaction on a toxic-exhaustive (?) basis had a diastolic mean variation (9.7) on one occasion, which exceeded the highest recorded systolic mean variation.

# RELATION OF BLOOD-PRESSURE TO AFFECT, VARIABILITY OF AFFECT, AND GENERAL ACTIVITY.

Group A.—There was no evident relation between general activity and variability of blood-pressure. The mean variations of blood-pressure were as great on the whole in the quiet (i.e., abnormally inactive) and normally active cases as in the restless cases. No general statement could be made in these subjects about the relation between variability of affect and of blood-pressure.

Group B.—No correlation could be seen in this group between maximal daily variation and degree of activity, but the M.V. (systolic) tends to be greater in the restless cases. No relation is discernible between those cases having more changeable mood and the mean variation of blood-pressure.

Group C.—These cases showed no uniform correlation of inactivity with slight variability in blood-pressure. In fact, although as a group less physically active than the preceding two, they showed a greater average variability. Nor was a changeable type of mood disturbance (i.e., with a tendency to emotional outbursts of crying or laughing) associated with a greater variability of blood-pressure (either systolic or diastolic).

AVERAGE BLOOD-PRESSURE COMPARED WITH DAILY STANDARDS FOR CORRESPONDING AGE-GROUP (HUNTER'S (10) STANDARDS).

Group A.—Only 5 had an average daily pressure always above the normal average.

Group B.—In this schizophrenic group 6 cases had a pressure always very considerably above the normal, while the pressures in the remaining 9 were usually below the normal average.

## SUMMARY AND CONCLUSIONS.

There is a considerable variation in the blood-pressure, both systolic and diastolic, in all the groups of subjects observed.

This variability is evident in the course of a single day, and also from day to day.

The diastolic pressure may, and not infrequently does, vary proportionately as much as the systolic.

The variability is greater in restless subjects, under the conditions of the experiment.

The variability is greater on the whole in affective disorders and in organic nervous disorders than in schizophrenic cases.

The blood-pressure is not necessarily more labile in subjects showing lability of affect than in subjects in whom the depth of affect does not appreciably vary.

The blood-pressure does not follow a uniform diurnal course.

When average pressures were considered, it was exceptional for a subject with a prevailing depressive affect to have a systolic blood-pressure persistently above normal; whereas the schizophrenic group showed persistently high and persistently low pressures in about an equal proportion of cases.

I am indebted to Prof. Adolf Meyer, Director of the Phipps Psychiatric Clinic, the Johns Hopkins Hospital, Baltimore, for permission to make the above investigations.

## References.

(1) Schrumpf, Deutsch. med. Woch., 1910, p. 2385.—(2) Craig, Lancet, 1898, i, p. 1742.—(3) Faught, Blood-pressure, 1916.—(4) Janeway, Clinical Study of Blood-pressure, 1904.—(5) Erlanger and Hooker, Johns Hopkins Hospital Reports, 1904, xii, p. 53.—(6) Wexberg, Zentralbl. f. d. ges. Neur. u. Psychiat., 1924, xxv, p. 1.—(7) Enebuske, Zeitschr. f. d. ges. Neur. u. Psychiat., 1916, xxxiv, p. 449.—(8) Beaudouin, Ann. Méd. Psychol., 1921, lxxix, p. 224.—(9) Morgenthaler, Allg. Zeitschr. f. Psychiat., 1910, lxvii, p. 1.—(10) Hunter, quoted by Russell, Brit. Med. Journ., 1924, May 17, p. 853.

The Sudorific Reaction in Certain Types of Psychosis. By L. C. F. Chevens, M.R.C.S., L.R.C.P., D.P.M., Second Senior Assistant Medical Officer, Parkside Mental Hospital, Knight Research Fellow, and P. B. Mumford, M.D., M.R.C.P., Visiting Pathologist, Parkside Mental Hospital, Assistant Manchester and Salford Skin Hospital, and Manchester Royal Infirmary.

A ROUTINE examination of a series of healthy persons, chosen at random, reveals a very wide variation in certain of the physical characteristics of the skin. Such changes are found particularly to affect the sweat secretion, and are considered in this communication.

In the hands, for example, there is a graduated series of types of skin and circulation. At one extreme exists the dry, harsh skin; at the other is the moist, blue-red hand (almost erythromelalgic), from which perspiration drips visibly. Patients under treatment for mental disease show a far greater percentage of individuals whose variation from the healthy mean is a wide one.

Observation reveals the fact that sweating occurs very easily in some patients, whereas in others even the most provocative circumstances fail to induce visible moisture. The impression obtaining among clinicians that the manias belong to the former types and the dementia præcox to the latter is in the main a correct one. Such impression has been experimentally confirmed and placed on a more scientific basis.

# THE PHYSIOLOGY OF SWEATING.

When the body is exposed to a raised external temperature a series of physiological changes takes place, the purpose of which is to retain the blood heat at "normal" level. It is with this particular function of the skin that we are immediately concerned.

The temperature of the skin is usually at a somewhat lower level than that of the blood. During life there is a constant dissipation of heat from the body—partly by radiation and convection, and partly by insensible perspiration. If the heat production be increased there is a general superficial vascular dilatation, and in consequence a greater "surface" of blood-vessel exposed to the cooling effect of the surrounding medium. Should this surrounding medium be at too high a temperature to allow sufficient loss of body heat there is a marked increase in the moisture output of the skin—cooling is provided by a greater evaporation.

It is thus clear that a dry heat is more easily borne than a moist heat. Under the latter circumstances evaporation can only take

place with difficulty: 200-250° F. can be borne without evil effects by man, in a dry atmosphere, whereas 89° F. in a saturated atmosphere may be fatal.

Sweating is under the control of the sympathetic nervous system. The fibres responsible for alteration of sudoriferous activity leave the spinal cord by the anterior nerve-roots forming the white rami communicantes which run to the chain of sympathetic ganglia, there forming cell stations. From these, fresh fibres (the grey rami) join the various spinal nerves, thence reaching the sweat-glands.

According to Starling the control centres of sweating are situated in the central nervous system, and changes in activity are induced by the advent of heated blood thereto. Kahn showed that sweating would take place in a cat when the blood in the carotid was warmed while the temperature of the blood in the rest of the body remained unchanged.

Impulses pass from the brain, through the sympathetic nerves, to the sweat-glands. At the same time impulses pass to the peripheral vessels along the sympathetic nerves, and, as these vessels also dilate locally on the application of heat, sweating is usually associated with reddening of the body surface.

Although, according to physiological experiments, the sweat-glands are innervated by the autonomic system, results obtained by pharmacological methods are not such as would be expected. Adrenalin, which stimulates the sympathetic, does not promote sudoriferous activity, but, according to Langley, lessens the production of sweat by its vaso-constrictor action. Freund, however, regards adrenalin as a sweat-promoter by direct action on the glands because, electrophoretically introduced under the skin in man, it produces sweating in the heat chamber when the untreated skin remains dry (1).

The various physical states of the skin of the individual are found to vary within wide limits. This variation affects colour, moisture, thickness, greasiness, elasticity and many other characteristics.

# DETAILS OF THE PRESENT SERIES OF EXPERIMENTS.

The method of the examination of the reactions of each subject to radiant heat was identical in all cases.

The subject was stripped, and then clothed in a garment of such a type that alterations in the amount of surface moisture could be easily observed. In the case of males a small pair of drawers was employed. The females were clad in a garment covering the upper

<sup>(1)</sup> Schilf, "Die Innervation der Schweiss Drüsen," Klin. Wochenschr., Berlin, March 12, 1923, 11(1), pp. 503-508.

part of the body, which unlaced down the front. This was light and very loosely fitting, in order that radiation of heat from the body should be interfered with as little as possible.

The subject was reassured and made as contented as the circumstances allowed, in order to minimize the physical accompaniments of the emotion of fear.

The pulse-rate and several readings of systolic and diastolic blood-pressures were then taken—the lowest reading being accepted as the true one as in several cases the first readings appeared to be rendered high by anxiety or fear.

The following details were noted at the time of examination in all cases:

(1) The build of the subject—with any special features in appearance; (2) the texture and nutrition of the skin; (3) the general moisture of the skin and any local sweating of the hands, axillæ, groins, or forehead; (4) the presence or absence of pigmentation; (5) the general and regional hairiness of the subject; (6) the nutrition of the nails; (7) the colour and temperature of the peripheral areas of the body; (8) the amount of subcutaneous tissue; (9) the size of the thyroid.

Details of the subject's physical condition were obtained from the ward sister. Other details were ascertained from casesheets.

The temperature of the radiant heat bath was brought to The carbon filaments, by which the bath was heated, were controlled by four switches, and, with a little care, it was not difficult to increase the temperature at an approximately equal rate in each case. The subject was placed in the bath, one switch only being depressed as it was found that this was sufficient to raise the temperature about 10° F. in the first five minutes. At the end of that time the condition of the subject, which had been observed through the glass lid of the bath throughout, was recorded. Another switch was depressed, observations of the condition of the subject and the bath temperature being recorded at the end of each successive period of five minutes, an endeavour being made to increase the temperature slowly and equally in each case; the aperture in the lid through which the head protruded was large enough to admit an arm, so that it was possible to note any increase of "clamminess" by the sense of touch, without allowing the bath temperature to fall. As soon as visible perspiration was seen in little beads on the trunk, the heat was cut off and the total time and final temperature recorded. Sweating of the trunk was taken as indicating the onset of general visible sweating, although most subjects perspired much more quickly

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in the axillæ or palms of the hands, because in man the sweatglands of these areas are particularly developed. The subject remaining in the bath and protruding an arm, systolic and diastolic pressures and the pulse-rate were again taken. After this a cold shower was given for ten seconds and the blood-pressure and pulse immediately taken.

## THE THREE TYPES OF SUDORIFIC REACTION.

In the radiant heat bath the skin is almost completely surrounded by an atmosphere of dry heat. Thus the onset of visible sweating is delayed for some time because the lesser degrees of moisture are rapidly evaporated on their appearance and are therefore not clear to the naked eye.

Many persons of varying type show a persistent sudoriferous activity in the glands of the palms, soles and axillæ. The value of this to the physiological economy of the body machine is not clearly understood. In certain cases there is a necessity for increased heat loss (e.g., exophthalmic goitre), though for its occurrence in dementia præcox some other reason must be sought.

Moisture is always present on the skin of the trunk in small quantity, and it is likely that any increase of temperature (external) will be associated with some further output. It is not until this is excessive that the fluid accumulates and forms small globules over the trunk, producing "visible perspiration."

It is the time of appearance of these beads of fluid on the trunk that varies so very widely. All times between 5 and 35 minutes have been recorded under apparently almost constant experimental conditions.

Roughly there exist three groups: Individuals included in the first of these sweat under a very mild thermal provocation; those in the third require a very long exposure to a comparatively high temperature before there is any evidence to the eye of sudoriferous activity. Between these two extremes are found the average cases who require an intermediate time of exposure and degree of heat. Typical examples of the first group of cases are usually found to possess a skin which is of fine texture, moist, without sense of harshness, and whose subcutaneous fat is less than the average. The patients have a quick pulse with warm hands and ears. The axillæ, mid-scapular and mid-sternal regions are found to be just moist to the touch.

During the first five minutes, as the temperature rises from 90-100° the moisture of the axillæ will, in most cases, increase (in some to a very marked degree). During the second five minutes

a further increase takes place and there may occur a palpable, though not yet visible, moisture. The impression conveyed to the touch is perhaps best described as one of "clamminess."

Within the following ten minutes, as the temperature has risen to about 120-130°, the moisture becomes visible. This onset seems frequently to be sudden. A dew-like glistening appearance is found. This occurs on definite areas of the anterior surface of the trunk (the area under closest observation). These areas are three: the umbilical and submammary regions, and the area of skin covering the xiphisternum. Within a very few minutes the intervening areas are affected and the whole skin becomes visibly moist. At this point the experiment is usually terminated.

The intervening group reacts much as the above, but the onset of visible perspiration on the trunk is delayed for a longer period. These persons do not, as a rule, show the moisture of hands and axillæ found in either of the other two groups.

The third group comprises those persons in whom the delay of onset of sweat secretion is much above the average. Very marked cases of this are found occasionally in a routine examination. In such, though the body be exposed to a comparatively excessive heat for unduly long periods, there is little or no active secretion of moisture from the glands of the trunk. That they are not necessarily developmentally incomplete is shown by the fact that if the exposure to heat be continued they will eventually demonstrate a marked general visible hyperidrosis—it is thus clear that there is a complete, though sluggishly acting mechanism.

From this group must be excluded those whose skins, from congenital abnormality, do not sweat—certain of the xerodermias, mild ichthyosis, etc. A fact of interest and one of quite common occurrence, is that these individuals possess a much impaired peripheral circulation. In cold and warm weather alike their hands are cold, blue-red and clammy. The fingers and soles are often the site of visible perspiration.

A number of other changes are noticed to occur in response to exposure to dry heat, particularly as regards the pulse, the blood-pressures, the colour of the skin, and the mental condition.

An analysis of the cases examined will show that in response to heat there is an almost constant rise in the pulse-rate. The degree of increase, however, is a very variable one: some cases show a very slight increase, even after prolonged exposure, and others even after a comparatively short stay in the heat exhibit a very marked tachycardia.

The rise in pulse-rate may conceivably be the result of several different factors:

- (1) The blood-pressure has fallen because there is diminished peripheral resistance in the capillary and arteriolar bed. A continuous supply of nutrition for the vital centres is maintained by a compensatory increase in pulse-rate.
- (2) There is probably some irritation of medullary control areas by the raised blood temperatures.
- (3) In many cases the element of something unusual occurring to which the individual is unaccustomed will play some part in the production of an emotional tachycardia.

As would be expected, every case examined showed at an earlier or later period some general vaso-dilatation, as evidenced by an erythema of the skin. This was of necessity more marked in the hands of cases of primary dementia, since these latter almost invariably show some capillary paralysis.

Again, maniacal subjects were observed to become much quieter after a period of exposure to dry heat. Other types manifested a desire for sleep, probably brought about by the reduction of blood-supply to the cerebral cortex.

### THE FACTOR OF SUDORIFIC DELAY.

For comparative purposes it was felt desirable that some figure be chosen in order to denote the type of response which took place in the sudoriferous glands when the body was maintained in a dry, still atmosphere.

Such figure must include two factors—the rise of temperature and the period of exposure. To directly multiply would not only give an unwieldy figure, but it would fail to give sufficient prominence to the temperature rise. On this account it was decided to multiply the number of minutes of exposure by the number of degrees Fahr. of temperature above 90° at which visible perspiration occurred. The product was divided by 10, and the arbitrary figure so obtained is henceforward referred to as the factor of sudorific delay (F.S.D.). 90° F. was chosen because, if one had taken 98'4° as the initial temperature, the F.S.D. would often have been a decimal fraction.

As an example, if an individual was exposed for 20 minutes to air the temperature of which was gradually raised during that period from 90-120°, then the F.S.D. would be  $\frac{20 \times (120-90)}{10} = 60$ .

The wide variation obtained in these figures may be exemplified by a case of mania with an F.S.D. of 6 and a case of primary dementia with an F.S.D. of 253.

#### INFLUENCES MODIFYING THE F.S.D.

Apart from consideration of mental condition, we must now mention certain factors affecting the sudoriferous activity of all individuals.

# A. Developmental.

It is conceivable that lack of or delay in sudoriferous activity may be due to a defect in either the glands themselves or in the nervous mechanism by which their activity is brought about.

Thus a congenitally malformed skin, such as is described under the name "xerodermia," is one in which there is a definite under-development in the number of sweat-glands, combined with a hyperkeratosis, which further reduces their output. It is possible therefore that lack of capacity for sweating may be due to a reduced number of glands.

The delay of sweating may also be due to an underdevelopment or structural deficiency in the nervous system.

# B. Habit and Occupation.

It is possible that from lack of usage throughout early years the glands may not attain their full development. Considerable evidence is forthcoming that a continuous call for sudoriferous activity on the part of glands eventually results in a hypertrophy with excessive secretion.

## c. Endocrine Action.

It is clear that sweating is dependent on the activity of the sympathetic nervous system. The endocrine glands and the sympathetic nervous system are so closely bound together that changes in one must be accompanied by changes in the other. Increase or decrease of the output of one gland will result in changes in one or more of the other glands.

With regard to the thyroid gland, we have definite clinical evidence that increased secretion is associated with increased sudoriferous activity. This may be due to the excitatory effect of the thyroid on the chromaffin system or to the physiological necessity for increased heat loss, hyperthyroidism being invariably accompanied by an increase of basal metabolic rate.

In myxœdema we have the reverse effect—a dry harsh skin with absence of sweating even on strenuous exercise. Adrenal increase is associated with increased sudoriferous activity; conditions such as fear are accompanied by an outpouring of adrenalin—the syndrome described as "a cold sweat."

# D. Skin Type.

The dryness or reverse of skin varies within wide limits, but there are certain definitely pathological degrees of dryness in which there is a marked reduction of sudoriferous activity under all external and internal circumstances. Such cases (e.g., two cases of xerodermia examined) were of necessity excluded when drawing the conclusions in this communication.

One proviso must be made before concluding this section, namely, that cases occur in which the sweating is of average activity in spite of some congenital ichthyosis. Such persons are on this account frequently the subjects of eczema.

# E. Age.

There appears to be no gross effect exerted by age on the activity of the sudoriferous response to dry heat—persons of 60 years of age are seen to react easily in a few minutes without any undue rise of temperature. Where the skin is very wasted and atrophic there is apparently some delay in response. This is probably associated with and partially due to a corresponding reduction in the activity of the thyroid gland.

#### CORRELATION BETWEEN F.S.D. AND MENTAL STATE.

A routine examination of 77 individuals, consisting of 5 controls and 72 patients in Parkside Mental Hospital, revealed a very wide variation in the factor of sudorific delay. Extremes of 6 and 253 were obtained amongst these.

In order to determine whether there was any relationship between the mental state and the F.S.D. a mean figure was obtained for each of the following groups: Dementia præcox, mania and normal. A number of cases of miscellaneous mental diseases not included in these groups were examined. The results given are briefly as follows:

Dementia pracox.—The average F.S.D. was 143. After experiment the average alteration in pulse-rate was from 82 to 108. There was an average rise in pulse pressure from 40 to 50 mm, of mercury. The systolic pressure dropped from 124 to 111.

Mania.—The average F.S.D. was 46. After experiment the average alteration in pulse-rate was 87 to 98. There was an average rise in pulse pressure from 40 to 46 and the systolic pressure dropped from 127 to 112.

Normal individual.—The average F.S.D. was 54. After experiment the average alteration in pulse-rate was 85 to 103. There was an average rise in pulse pressure from 50 to 53, and the systolic pressure dropped from 137 to 115.

Miscellaneous.—In this group cases of xerodermia were excluded and the average F.S.D. was found to be 84, the pulse-rate rose from 96 to 109 and the alteration in pulse pressure was a fall from 44 to 37. The systolic pressure fell from 136 to 131.

It is thus clear that primary dementia præcox is accompanied by a very marked delay in the onset of sudoriferous activity, and that mania shows some increased rapidity of onset as compared both with the average figure for healthy persons and with those suffering from other mental diseases. The alterations in pulserate, pulse-pressure and systolic pressure are not markedly affected. It is of interest to note that there is little correspondence between the temporary mental state and the F.S.D., the chief factor being the permanent mental condition.

Considerable difficulty exists in any attempt to explain the above findings. Several facts of interest are, however, generally accepted and give some clue to the meaning of the changes. They are: (I) Marked alteration from the normal structure of the endocrine glands has been observed by many workers in varying types of mental disease—notably in dementia præcox (Mott, and others); (2) the endocrine and sympathetic systems are closely allied and interdependent; (3) the secretion of sensible perspiration, according to Langley, is under control of the central nervous system through the sympathetic system. Thus a damping-down of the activity of the sympathetic nervous system will result in impairment of response to heat of the sudoriferous glands.

A possible explanation of the high F.S.Ds. given by primary dementia cases and the low F.S.Ds. given by mania is found in the sluggishness or increased activity of the sympathetic systems in these cases. For the moment, until further research into the varying endocrine systems can be made, it is sufficient merely to note the clinical facts. An interesting analogy may be here pointed out between the sudoriferous activity of the palms at rest and the body after exposure to heat in the post-encephalitic states and dementia præcox.

Since writing this paper the existence of a state of sluggish excitability of the sympathetic nervous system in cases of dementia præcox shown by a characteristic reaction to the injection of adrenalin, has been demonstrated (W. McWilliam, Journal of Mental Science, July, 1925).

One would imagine a habit-formation to have some influence on the sudoriferous activity. The maniac, on account of his restlessness, sweating much more frequently than the primary dement, and thus reacting more quickly when exposed to radiant heat. In the series of cases examined, however, the F.S.D. of the restless dement or the dement leading a fairly active life was found to differ very little from that of cases of katatonic stupor.

Modifications of the Sachs-Georgi Test used to Determine the Incidence of Syphilis in those Admitted to a Mental Hospital (1). By Herbert Smith, M.R.C.S., L.R.C.P., Assistant Medical Officer, The Mental Hospital, Fishponds, Bristol.

In my remarks upon those modifications of the Sachs-Georgi reaction which I have carried out recently upon the patients admitted to this hospital during the last twelve months, I may well start by repeating those words of caution, that "though one may always suspect syphilis one should be slow to diagnose it."

When Wassermann, in 1906, introduced his test for syphilis, he believed that his reaction was one of complement-fixation—in agreement with the antigen-amboceptor-complement reaction which had just previously been established for the identification of bacteria and their antigens, and he accordingly made use of an extract of syphilitic liver as antigen. It was soon discovered, however, that many other non-specific "antigens" could be used, and also it was found that syphilitic sera tended to produce precipitates with lipoids more readily than normal sera.

In 1918 Sachs and Georgi devised the flocculation reaction known by their names. In this and other flocculation methods three of the variable factors of the Wassermann reaction are eliminated. there being but serum, antigen and cholesterin. antigen an alcoholic extract of bullocks' heart-muscle, made by adding 5 c.c. 96% alcohol to every I grm. of heart muscle, and to every 100 c.c. of this extract they added 200 c.c. 96% alcohol and 13 c.c. of 1% cholesterin. For use in the test they added I volume of this heart-cholesterin extract to 5 volumes of saline to produce an opalescent emulsion—not one which was turbid or opaque, such as other workers have at times found this extract to yield. To I c.c. of a I in 10 dilution of the inactivated serum of the patient they added 0.5 c.c. of the above emulsion (i.e., a I in 15 dilution of serum) and incubated at 37° C. for 2 hours (subsequently they recommended 18-20 hours), and regarded as positive any tube giving a flocculation or precipitate visible to the naked eye or hand lens.

Later Dreyer and Ward, in 1921, published their Simple Quantitative Serum Reaction for the Diagnosis of Syphilis, and the Expression of Results in Standard Units. In order to justify this title they laid down definite fixed details for the making of the antigen, temperature of inactivation of the serum, temperature of reaction, etc., and they used a more stable antigen—one containing the

<sup>(1)</sup> A paper read at the Spring Meeting of the South-Western Division at Bristol, April 29, 1926.

acetone-insoluble alcohol-soluble substances of the heart muscle. They employed two suspensions of different concentration:

- (a) suspension—I c.c. heart-cholesterin extract into which 10.7 c.c. of saline are dropped; and
- ( $\beta$ ) suspension—I c.c. heart-cholesterin extract into which 34 c.c. of saline are dropped.

These are made up by the use of a floating syphon dropping apparatus set to deliver saline at a definite rate (34 c.c. in 41 minutes), the height of the drop being 36 cm. The serum is inactivated at 55°C. for 90 minutes, and a series of 9 tubes set up with the serum in dilutions ranging from I in 1.25 to I in 530. These tubes are then incubated in open water-bath at 37° C. for 20-22 hours (doubtful and negative tubes are given another 20-22 hours' incubation and read again). In the reading they distinguish 9 degrees of flocculation and precipitation from total to nil (t; t-; S+, S, as one that can readily be seen with the naked eye, the fine flocculi are evenly distributed, of uniform size, and definitely separated from one another—the fluid shows some degree of clarification. Finally, in order to express results in standard units ( $\Sigma$  units), he assumes that  $4\Sigma$  units is contained in the amount of serum which, when made up to I c.c. with normal saline, causes standard flocculation with 1.5 c.c. of a particular  $\beta$  suspension when maintained at 37° C. for 7 hours. All sera containing more than 1.5 Σ units per c.c. are considered positive.

In this method the dilutions of serum and saline are somewhat complicated, and the use of the dropping-pipette tends to become laborious when any large number of sera have to be examined.

In the various modifications of the flocculation tests I have employed I have used as antigen the a and  $\beta$  suspensions of Dreyer and Ward, and also an emulsion made up from a single heart-muscle extract as follows: The heart-muscle extract is an alcoholic extract (5 c.c. alcohol to every I grm. and incubated at 37° C. for 7 days). To 50 c.c. of this 40 c.c. 1% cholesterin is added. The emulsion is made up from this in the manner described by Webb (Trans. Roy. Soc. Trop. Med., 1925, xviii, p. 432). 10 c.c. 0.9% saline are put in a cylindrical vessel and I c.c. of heart-cholesterin extract floated gently on the surface. The vessel is then taken in the hand by its open end and a circling movement performed, whereby the lower end of the vessel describes a circle larger in diameter than the upper end which is being held in the hand. Complete mixture is effected in 3-5 minutes.

Using these antigens, combinations of the following conditions have been employed:

- I. (a) Fresh serum. (b) Serum inactivated at 55° C. for 90 minutes as in the Dreyer and Ward method.
- II. (a) Room temperature 54-67° F. (b) Water-bath 37° C., readings being taken at 24 and 48 hours or longer in the absence of contamination.
- III. (a) Single tube with dilution of serum I in 6. (b) Series of dilutions as in Dreyer and Ward's first three tubes (i.e., I in 1.25, I in 2.5 and I in 5.2).

The largest number of tests so far done have been employing—

- I. The single tube of fresh serum and incubating in water-bath at 37° C. for 24 and 48 hours—156 tests.
- II. The first three tubes of Dreyer and Ward's dilutions with serum inactivated at 55° C. for 90 minutes and incubated in water-bath for 24-48 hours—87 tests.

Readings have been: Positive, definite flocculi readily visible to the naked eye; doubtful, granular appearance of fluid; negative, no change.

During the ten months in which the work has been done, specimens of blood and cerebro-spinal fluid have been examined from 24 cases of general paralysis, and though the number of tests done on these samples is small, the results are apparently comparable to the results obtained with sera from the other patients:

The single-tube method gave (in 39 tests) 62% positive, 15% doubtful, 23% negative.

The three-tube method gave (in 16 tests with Webb's antigen) 100% positive; (in 8 tests with Dreyer's antigen) 86% positive, 14% doubtful, *nil* negative.

The apparently poor result in the Dreyer's antigen may be explained by reason of the number of tests done being only 8.

Without going further into figures of results, this being no attempt at comparison of methods, but rather the record of a gradual adoption of the method which appeared to be giving results most in keeping with clinical facts and history, 410 tests were done on 210 specimens (blood and cerebro-spinal fluid) obtained from 96 patients admitted between April 1, 1925, and April 1, 1926. Of these 96 patients, 25% were found to give a positive reaction; 15.6% a doubtful reaction; 59.4% a negative reaction.

During the period 14 cases of general paralysis were admitted, and if these be excluded from the percentage results there will then be 12.2% +, 18.3% ++, 69.5% -.

It has been said that the percentage of syphilis amongst insane non-paretics is little or no greater than that of the population from which they are drawn. In records of syphilis amongst patients attending general hospitals the percentage has been put at 10-12,

and it has been estimated in evidence before the Royal Commission on Venereal Disease that for Great Britain 10% of the population of the large towns are suffering from syphilis.

In conclusion I would suggest that-

- (1) The simpler flocculation tests, such as may conveniently be carried out in the laboratories of mental hospitals, are quite capable of yielding results of considerable assistance in correct diagnosis.
- (2) The flocculation method employed be one in which a series of dilutions (three or more) of inactivated serum are set up for incubation with an emulsion from a simple heart-cholesterin extract.

The Malarial Treatment of General Paralysis (1). By John Dunne, M.B., Assistant Medical Officer, Grangegorman Mental Hospital, Dublin.

At the Spring Meeting of the Irish Division, 1925, Norman Graham, of Purdysburn Villa Colony, Belfast, read a very interesting paper on the malarial treatment of general paralysis. Dr. Graham dealt very fully with its history and the various theories which are put forward to account for its remarkable curative properties. Since then I have carried out the treatment at Grangegorman Mental Hospital, and I propose, therefore, merely to give a short résumé of the methods used and results.

In all about 35 cases have been, or are, in course of treatment. I am only concerned here with the first 25, as the remainder have only been recently inoculated. The majority of these 25 cases had been a long time in the institution, and were in an advanced condition of paralysis. In each case the diagnosis was confirmed by the usual serological tests.

Dr. Graham kindly supplied the defibrinated blood containing benign tertian parasites. I injected from 2 to 4 c.c. subcutaneously at the angle of the scapula, following Dr. Gerstman's plan of inoculating each layer of tissue as it was pierced by the needle, in order to give the plasmodium a better chance of getting into the circulation. The average incubation period was from seven to fourteen days, varying with the quantity of blood injected. I found that the incubation period was much shorter when 4 c.c. were given than when 2 c.c. were given. In only two cases did no reaction occur, though some required to be injected more than once. One case was injected four times before developing malaria.

<sup>(1)</sup> A paper read at the meeting of the Irish Division held at Dublin, April 22, 1926.

The course of fever in each case was of the true benign tertain type, with considerable variations in the severity of the symptoms. In some the temperature reached 106° F., while in others the maximum was about 103° F.

The malaria subsided spontaneously after six rigors in about three-fourths of the patients. These were treated with quinine, and after they had recovered from their anæmia, were inoculated with fresh parasite. The majority again developed malaria of a mild type, which tended to spontaneous recovery after three or four rigors. A few, however, ran a long course, which had to be stopped with quinine. From this I infer that one attack produces a mild degree of immunity, which gradually passes off with time.

An attempt was made to revive the parasite in 7 cases where the malaria had subsided, by intravenous injection of 10 c.c. of a 10% solution of sodium nucleinate. The malaria was not revived in any case, but a very severe reaction resulted in two, with a single rise in temperature to 106° F.

I allowed the remainder to attain to about fourteen rigors and then administered quinine 10 gr. thrice daily, following which the fever subsided almost immediately, the parasites disappearing from the blood a few days later.

The immediate general result of the onset of the fever on all patients was a marked anæmia. In four instances jaundice was a complication, and pneumonia in two. Any improvement that took place began as a gradual process after the administration of quinine.

In grouping the results I have found it most convenient to adhere to the following: Greatly improved, slightly improved, no improvement and deaths. Of the 25 cases, 8 are greatly improved, 7 are slightly improved, 5 show no improvement, 5 have died.

Of the 8 greatly improved, 2, who were of the expansive, excited type, had advanced tabes. They can now get about well, and with the exception of a little feeble-mindedness, show complete psychical recovery. Two have been discharged and have regained their employment; 4 are among the best workers in the house. Two of these latter had marked dysarthria, which has not improved very much; I developed typical epileptic fits, which ceased on the administration of bromides.

The 7 slightly improved show marked physical with little corresponding psychical improvement, but all are much more amenable and do light work. Each of these ran a very mild course of malaria, spontaneous recovery occurring in every instance. The 5 who showed no improvement were hopelessly demented and paralysed, and are still so. Five died, I from pneumonia, 2 from epileptiform seizures, and 2 as a direct result of their demented condition. An autopsy was done in 3 cases. The blood and all the organs contained the parasite in large numbers. The brain substance was very congested, but the microscopic appearance presented no change from that usually found in advanced general paralysis. Spirochætes were observed in only one case.

The most noticeable features in connection with the treatment are:

- (a) The recovery of control of sphincters in all cases except 2 out of 20 who had incontinence.
- (b) The marked physical improvements. Only 3 cases out of the 25 remain in a weak condition.
- (c) The ease with which the malaria can be controlled with quinine.
- (d) In no case was there recovery of the light reflex or of kneejerks, or of speech where these were lost.
- (e) The greatest improvement followed in those cases where the temperature was very high, and where the course of malaria extended for more than ten rigors.

#### Conclusion.

Eight out of 25, or 32%, greatly improved is a result which corroborates the findings of others who have been engaged in this work

The death-rate of 5 out of 25, or 20%, exaggerates the danger of the treatment, as in only 1 out of the 5 was death directly caused by malaria.

The malarial treatment undoubtedly arrests the progress of the disease, and if given in the early stages, before there is extensive destruction of the brain-cells, offers a reasonable hope for cure.

My thanks are due to Dr. W. D. O'Kelly, of University College, for making the serological examination of the cerebro-spinal fluids, to Dr. Norman Graham for his advice, and to Dr. O'Conor Donelan, Medical Superintendent of Grangegorman Mental Hospital, for his permission to publish these results.

[At the same meeting at which this paper was read, a synopsis of the results of malarial treatment of general paralysis by Dr. Norman Graham, of the Purdysburn Villa Colony, Belfast, was presented, which together with those obtained by Dr. Dunne, recorded in the foregoing paper, show that the interest taken in Ireland in this treatment is not behind that of other countries.—Eds.]

# PURDYSBURN VILLA COLONY, BELFAST.

Results of the Malarial Treatment of General Paralysis.

Number	r treated in 192					•		70
,,	discharged	•			•	•		27 (38.6%)
,,	died .	•	•	•		•		16 (22.8%)
"	remaining in							
	admissions)							28 (37.2%)
**	failed to deve	lop n	ialari	a owir	ig to	prev	ious	4
	infection							I (I·4%)

The following figures for the years 1914-15 and 1924-25 show, as compared with the number of admissions, an increase of 47% of discharges as against 0% in the first of these periods, and also a diminution of over 50% in the number of deaths.

Year.		Admissions.			Discharg	Deaths.	
1914			19		0		2 I
1915		•	18		0		23
T	otal		37		0	•	44
			_				_
1924			27		11		13
1925	•		24		13		13
T	otal	•	5 I		24	•	26

The Whittingham (W.) Strain of Artificially Induced Malaria:
Observations made during the Treatment of General Paralysis
and Tabes Dorsalis. (1) By A. R. Grant, M.D.Aberd., Deputy
Medical Superintendent, and J. D. Silverston, M.B., B.S.
Durh., Senior Assistant Medical Officer, The County Mental
Hospital, Whittingham, Preston.

The treatment of general paralysis of the insane by malaria has been carried out in this hospital since July 21, 1922, and several observations on the value of this form of therapy in the disease have been made by us (4, 5, 6) from time to time. In this short note we wish to draw attention to some of the characteristics and behaviour of a strain of malaria which has now reached the fourth year of its existence, and which still retains all its former potency and therapeutic value.

<sup>(1)</sup> Reprinted by kind permission of the Editor with some amendment from the Journal of Tropical Medicine and Hygiene, April 15, 1926.

After preliminary work with strains of quartan, malignant tertian and simple tertian fevers, we came to the conclusion that the last named was the most useful for our purpose, and so the birth of the Whittingham (W.) strain took place on September 8, 1922, when a general paralytic was inoculated with blood from a patient who had contracted benign tertian malaria in India. From this host a long chain of cases of general paralysis and tabes has been infected. During the last forty-two months (three and a half years) the strain has been transmitted by direct subcutaneous inoculation through sixty cultural generations, comprising over one hundred and fifty cases. Anopheline mosquitoes (maculipennis and bifurcatus) were infected with P. vivax by feeding them on patients in the twelfth and sixteenth passages of the strain. These mosquitoes were subsequently used to infect two of our cases, namely, one case of tabes dorsalis and one case of dementia præcox. Two more malarial stems of the simple tertian type were thus obtained, and as one originated in a non-syphilitic case of dementia præcox, we decided to name our strains of tertian malaria Whittingham (or W.). W. I and W. II respectively. The strains W. I and W. II were allowed to die out; the former in a syphilitic host was not further utilized, and the latter was stopped after several successful passages in non-syphilitic psychoses which has led us to believe that malaria is not a therapeutic measure of value in these cases. Again, with the Pötzl (1, 10) method of inoculation, which in our hands has been successful with infected blood kept outside the body at o°C. for varying periods up to 72 hours, we have enabled other hospitals in the country to commence and make observations on this form of treatment. The W. strain in this way has been of service in the following general and mental hospitals: Leavesden, Exeter, Cardiff. Shrewsbury, Birmingham, Bradford, Cheddleton, Morningside, Cheadle Royal, York, Sunderland, and the Liverpool School of Tropical Medicine.

Artificially induced malaria was obtained by injecting usually 2 c.c. of recently drawn venous blood from an infected source into the subcutaneous tissues of the host. As a general rule this operation was not followed by any constitutional or local reaction, but in a few cases fever (a temperature up to 101°F. on the second or third day), and frontal headache and soreness at the seat of inoculation were encountered.

The incubation period calculated from the date of inoculation to the day of appearance of parasites in the peripheral blood-stream has been fairly constant, and although varying occasionally between 6 and 20 days, averaged from 10 to 12 days throughout the period. In 5 cases two inoculations were required before the fever and

parasites appeared. These failures after primary inoculation were evenly spread over the "life" of the strain under review, and cannot be satisfactorily explained. Seizures of an epileptiform or apoplectiform nature have occurred during the incubation period, and on each of the three occasions we have considered it wise to prevent infection taking place, and to reinoculate at a later date.

Ronald Ross (8) mentions that Ben-Harel has shown that in a series of blood inoculations of canaries with Proteosoma, the red blood cell-count begins to diminish even as early as the day after the inoculation, and long before the parasites become sufficiently numerous to be detected in the birds' peripheral blood. decline was progressive day after day until from one-half to two millions of erythrocytes disappeared from the normal count (4.5 to 5 millions per c.mm.), when the parasites were discovered in the peripheral circulation. Daily erythrocyte counts were made on a series of 7 male general paralytics before and after the inoculation. and every day until P. vivax was demonstrated in the blood-films. The drop of blood in each case was taken from the finger 2 to 3 hours after the midday meal, and an average of three counts recorded. On the first day after inoculation there was a reduction in 4 cases and an increase in the remainder, on the second day a reduction took place in 5 cases, on the third day in 4 counts, and on the fourth day a drop in 5 instances. In Case 4 there was an erythrocytosis for 4 days. On the sixth day and up to the day of appearance of parasites the erythrocytes showed a diminution in all the cases. The lowest counts were recorded usually between the fifth and eighth days inclusive, and averaged 3,100,000 cells; the reduction, however, was never progressive.

The commencement of the fever generally preceded the appearance of parasites in the peripheral circulation by I to 4 days; often parasites and fever coincided in the day of their appearance, while occasionally P. vivax forestalled every sign of approaching fever by 2 to 4 days. The fever began usually with an increased pulse-rate and an elevation of temperature to 99° or 100° F., which mounted gradually for the next 2 or 3 days to a maximum of 103° or 105° F. before subsiding to the normal. This form of irregular pyrexia generally preceded and formed an introduction to the development of the malarial rigors that invariably followed in their regular sequence. Rigors, although often slight in degree, appeared in some cases without any preliminary warning and waxed in intensity as the fever continued.

In the early and middle passages of the strain the types of fever in order of frequency were quotidian, a mixed type of tertian and quotidian, and pure tertian. The quotidian fever, or *Tertiana*  duplex, has appeared most frequently during the whole period, but less so at the present moment, as the pure tertian type is becoming more common. As many as three paroxysms of fever have taken place in the short space of 24 hours, but fortunately for the patient the occurrence is uncommon.

In order to study more closely the changes in temperature during the various stages of the paroxysm, a series of patients were put on a "continuous" chart. That is, from the date of inoculation to the day of disappearance of parasites, the temperature, pulseand respiration-rate were recorded at intervals of half an hour. In this way several interesting observations were made. instance, we found that quite often the temperature showed an elevation of 2° to 3° F. above the subnormal interval range for an hour or so before the rigor actually took place, and less frequently a rise of temperature ranging between 99° and 104° F. for a period of 4 to 6 hours suggested the same approaching phenomenon. Of course in many cases the rigors were atypical, and the rise of temperature or the stage of sweating were the only criteria that a paroxysm of malaria had taken place. On the whole, the stages were clearly cut and observed a certain proportion to each other; as a rule the more pronounced the rigor the higher the fever and the more profuse the sweating. The maximum temperature of the paroxysm was reached in one-half to three hours, and varied in height with the number of the rigor; generally the highest maximum was seen in the third, fourth or fifth and ninth and tenth rigors, but this variation did not always hold good. The highest maximum temperature recorded in the cases of the early stages of the strain ranged between 103.6° and 106.2° F., and at present stages varies between 105° and 107.2° F. During the sweating stage the temperature gradually came down to normal, taking longer (from 9 to 17 hours) in the early than in the later rigors (from 5 to 8 hours).

Stephens (II) et alii, in 1921, studied the times of onset of 1,000 paroxysms of simple tertian fever in mosquito-borne malaria, and came to the following conclusions:

- (a) Over 90% of the paroxysms occurred during the hours of activity (7 a.m. to 7 p.m.).
  - (b) The maximum number of paroxysms occurred at 2 p.m.
- (c) Alteration of the period of activity by one hour, on account of the adoption of summer time, produced a corresponding alteration in the time of incidence of the paroxysms.

Now in our cases the conditions were markedly different, as, firstly, the inoculations were carried out in almost all the cases during the day, and, secondly, the patients were restless and

mentally active by night as well as by day. An analysis of 500 paroxysms was made, and the following data are available for contrast:

In the winter months 85.2% of the inoculations were carried out between 11 a.m. and 3 p.m., and 81.4% of the paroxysms occurred between 7 a.m. and 7 p.m.; the maximum number of paroxysms occurred at 2 p.m.

In the months when summer time was in force, 86.9% of the inoculations were performed between 11 a.m. and 3 p.m., and 74.7% of the paroxysms occurred between 7 a.m. and 7 p.m.; the maximum number of paroxysms occurred at 2 p.m. and 5 p.m.

A few inoculations were performed at midnight in the anticipation that by this measure most of the paroxysms would occur during the night or early morning. The alteration in the time of injection did not alter the times of onset of the rigors, and so the practice was discontinued. The onset of the chills may show a definite time-relationship to each other during the course of the fever. Very frequently one may see from the examination of charts from cases of Tertiana simplex that the individual rigors tend to anticipate in time of appearance the previous rigor, and so on throughout the course, whereas in quotidian fever both anticipation and delay in the times of appearance may be encountered. Atypical charts were met with in three patients at their first inoculation. In each case an apyrexial interval (with diminished number of parasites present in the films) intervened between the early and late paroxysms, so that the charts read in this fashion:

CASE S. C.—. Rigor (first), 4 apyrexial days, 7 rigors (quotidian and tertian), 13 apyrexial days, 3 tertian rigors, and quinine.

CASE P. S.—. 9 tertian rigors, 15 apyrexial days, 3 quotidian rigors, and quinine.

CASE W. L.—. 5 tertian rigors, 5 apyrexial days, 7 quotidian rigors, and quinine.

The question of the number of paroxysms that should be permitted in individual cases has always been of engrossing interest to us, and of paramount importance to the patient. Our early cases were permitted to have as many as 5 to 24 paroxysms (chiefly from 10 to 12), but we soon came to the conclusion that a patient who was going to get better would do so after treatment with 5 rigors as with 15, and at the same time would be spared an unduly prolonged fever with its likely train of complications and sequelæ. Again, from a histopathological study of the brains of successfully treated cases of general paralysis of the insane, Straüssler and Koskinas (12) have found that at least 5 malarial crises are required before changes are initiated in the cerebral cortex to bring about a

3 5 I

condition simulating the "stationary paralysis" of Alzheimer. Further, the reduction in the average number (from 7 to 8) of rigors permitted has not been followed by a corresponding drop in the rates of recovery or improvement, so that our practice of allowing no fewer than 5 but not more than 10 paroxysms of malaria has been apparently justified.

General paralytics and patients suffering from tabes dorsalis generally tolerate this form of fever extraordinarily well. In a small percentage of cases prodromal phenomena in the nature of various sensory disturbances may make their appearance and herald the approach of a paroxysm. These subjective sensations occurred in tabetic and non-tabetic patients, and varied from a dull ache in the leg-bones, especially the tibiæ, to the severe and lancinating pains in the joints or cramp-like pains in the calf muscles. Very often pains continued during the cold and hot stages of the paroxysm and disappeared as soon as perspiration commenced. The physical signs that accompanied the recurring paroxysms of the fever were apparently similar to those observed in mosquito malaria, but mental reactions were naturally expected to occur more frequently in our patients, and often did so in the later rigors. Delirious states. vivid hallucinations of sight and of hearing, paranoidal ideas and severe emotional outbursts with intense restlessness were encountered, and, as often as not, exhibited a tendency to become more prominent in the hot and sweating stages of two or three paroxysms and then disappear. Several reactions in the nature of paralytic seizures complicated the picture in 4 cases. Herpes was quite common, and appeared usually about the lips, less frequently about the nose, angle of the jaw, or malar bone. Attacks of gastroenteritis with vomiting and diarrhoa were occasionally present. but they were never severe in type and always responded quickly to treatment. Sub-icteric staining of the skin and mucous membranes occurred in the final paroxysms of a few cases; the iodine and Gmelin tests of the urine were negative, but often the Russo reaction was positive; the blood-serum had a yellowish tinge, and gave positive readings with the indirect reaction of the Van den Bergh test. Clinical jaundice with bile in the urine occurred in 4 cases at the thirteenth, thirty-first, thirty-second and thirty-ninth passages of the strain. The condition, which is always of serious significance and of grave prognostic import, appeared following the fifth, but nearly always after the seventh paroxysm. As a severe infection of the blood-stream with rapid and abundant hæmolysis of the red cells was suspected, the treatment was immediately brought to a close by the institution of quinine therapy. In 3 of the 4 cases the bile in the urine disappeared after 3 doses of quinine

had been given, and at the end of a week no trace of bile-staining of the tissues could be seen. The fourth case, which was also the thirteenth host, did not do so well, and passed on to a fatal issue on the day after the jaundice appeared. In one instance, where the treatment was prematurely arrested because of this complication, a reinoculation was successfully performed at a later period, when the patient passed through a complete course of fever therapy without showing any signs of jaundice. Daily examinations revealed generally a darkly coloured urine, acid in reaction and of increased specific gravity. Albuminuria was common, but usually no more than a trace was the rule; a marked increase occurred in two cases associated with pronounced constitutional reactions and indicated immediate stoppage of the treatment. Glycosuria (I to 1.5%) was rare. The Russo reaction may be positive prior to the appearance of bile, and was associated with sub-icteric staining of the tissues. Urobilinogen was slightly but infrequently increased. Hæmoglobinuria (9) fortunately did not Enlargement of the spleen, as far as could be ascertained by palpation and percussion, was always slight even during the paroxysm: this was also confirmed in cases which came to necropsy.

At the end of the fever there was usually a loss of weight, varying in individual cases from I to 8 pounds, with an average of 4 pounds. Occasionally a gain in weight actually took place. Pallor of the skin and a mild degree of secondary anæmia was observed in most of the cases during the final paroxysms or at the end of the fever. As a general rule the condition cleared up very quickly with the administration of quinine, and at the end of a week the bloodpicture became normal. One of our cases, however, developed a profound anæmia with a dirty yellow tinging of the skin at the eighth paroxysm of a quotidian fever; the usual dosage of quinine was given, and although the parasites quickly disappeared, the blood-picture did not appreciably alter, but closely simulated that often observed in pernicious anæmia. There was a marked reduction in the number of red cells (2,500,000), a leucopenia of 3,500 whites, a reduction of hæmoglobin to 20%, numerous microcytes and megalocytes, normo- and megaloblasts (few), poikilocytosis, polychromasia and punctate basophilia. Arsenic given orally and by the intravenous route rapidly improved the condition, and at the end of 15 days the anæmia had completely disappeared. Deaths within a month of the completion of the fever course occurred in II cases, and formed 55% of the total number of deaths in adequately treated cases over a period of  $3\frac{1}{2}$  years.

The morphology of the parasite (*Plasmodium vivax*) was carefully studied in over 10,000 blood-films that were taken in all cases at

every stage over a period of 3½ years, and we found that the parasite retained the form and characteristics of that seen in naturally infected cases, and despite the number of transmissions through the vertebrate host. Crescents were never found. Schüffner's dots in infected red cells were common. The number of parasites varied enormously in individual cases and at the different stages of the paroxysm and fever. The most common form of the parasite to appear at the commencement of the fever was the trophozoite; later, schizonts and gametocytes were seen. The parasites showed a general tendency to multiply rapidly with the fever, and to reach a maximum about the sixth or tenth day of the illness, when often a progressive diminution in numbers would set in, and in some cases lead to the complete disappearance of parasites from the peripheral blood-stream. Cases in which spontaneous autoimmunization developed during the course of the fever presented these features and were frequently encountered. Multiple infections of the red cell were seen in several cases at different stages of the strain. The red cells usually contained more than one parasite, and often as many as six or seven were counted; occasionally 2 gametocytes, 2 schizonts, or a gametocyte and schizont may be seen inhabiting the same red corpuscle. Pigmented leucocytes and white corpuscles containing parasites in all stages of degeneration have been found in the later paroxysms.

The susceptibility of induced malaria to treatment with quinine is remarkable. After a three-day course of treatment by the oral administration of hydrochloride of quinine-30 grains on each of 3 consecutive days—the fever quickly subsides, and the parasites rapidly disappear from the circulation. The quinine did not always prevent the next succeeding paroxysm, but nearly always postponed the time of onset and diminished its severity. The parasites show an extraordinary diminution in numbers after the first dose of quinine, and as a rule completely disappear by the end of the third day. It is this remarkable susceptibility of the parasite to quinine that renders control of the fever practically possible. In a few cases the fever and parasites exhibited a tendency to disappear spontaneously and without treatment by quinine. Spontaneous auto-immunization of this nature took place in certain patients inoculated for the first time, and generally developed between the fifth and tenth paroxysms; the immunity, however, was not always complete, as frequently parasites increased in numbers and paroxysms reappeared within 21 days. Vagaries of this kind were, however, much more common in several of the 17 cases which received a second course of treatment. inoculations were performed at periods varying in individual cases

from 22 days to 19 months after the primary injection; parasites were observed in the peripheral blood-stream of all the cases, and in 58.8% of the series several paroxysms of malaria occurred at regular and irregular intervals. Again, the fever and parasites spontaneously disappeared in nearly all cases and the administration of quinine was rarely required. Our results at this stage are interesting, as Nicole and Steel (7) have reported complete failures in the same undertaking with similar types of patients. It seems reasonable to suppose that an attack of induced malaria sets up an immunity process in the host which renders him partially or completely immune to a second infection—the maximum protection was acquired in our cases about the ninth or twelfth month after the first course of fever treatment.

Relapses in inoculated malaria are uncommon and accounted for 2 cases, or less than 2% of the patients infected with this strain during an observation period varying from 2 months to 31 years. The first case, which has already been reported elsewhere (5), relapsed 42 days after the last dose of quinine (total 90 gr.), and 18 days following the fourth injection of novarsenobillon. second patient relapsed 28 days after parasites had disappeared following the administration of a short course of quinine (total 60 gr.). Both the cases were treated by the usual three-day course of quinine, and no further relapses have been reported. The infrequency of relapses in this form of malaria emphasizes strongly the necessity of maintaining a strain of pure tertian for therapeutic purposes. Davidson (2) inoculated 20 cases of G.P.I. with infected mosquitoes, and reported 13 (56.5%) relapses within an observation period of 12 months. Again, Yorke and Macfie (13), and later, Yorke (14), reviewed a series of 37 patients similarly infected, and reported 21 (57%) relapses in a period of observation varying from 201 to 609 days, and in the majority of the 21 cases relapses occurred after treatment. Evidently mosquito malaria is more resistant to quinine than the inoculated form.

We have been informed that many trypanosomes pathogenic to man and stock undergo a marked increase in virulence to certain species of laboratory animals when maintained in them for long periods, by direct inoculation from one host to another. In some cases the alteration in virulence was attended by morphological changes which took place only after the strain had undergone a certain number of direct passages in the vertebrate host. It was therefore of considerable interest and importance to know whether the prolonged sojourn of P. vivax in man, comprising 60 direct passages during a period of  $3\frac{1}{2}$  years, had had any influence on the parasite, on the type of infection produced, or rendered it less

effective in the treatment of general paralysis. A comparison of the infections comprising the first 20 passages with those of the last 20 passages has yielded data which indicate that the strain has undergone no change in pathogenicity or virulence or alteration in therapeutic properties during the direct passage from man to man through 60 generations. Again, the morphology of the parasite has not changed, and differs in no way from that found in naturally infected cases. Anopheline mosquitoes were successfully infected in the twelfth and sixteenth passages of the strain, but it is doubtful whether the parasite at this stage still retains the power to develop in the invertebrate intermediary host, for Gerstmann (3), in a recent publication, emphasizes the fact that after repeated passages from one human being to another, the malarial parasite changes in such a way that it can no longer be infective to the mosquito, Anophelis maculipennis, or be transmitted by it to man.

In conclusion, we should like again to acknowledge our indebtedness to Profs. Stephens and Yorke, of Liverpool, for providing us with material to inoculate our early cases, to Dr. Clark, medical superintendent, for permission to publish these observations, and to Mr. A. H. Fann, senior laboratory assistant, for his kindly help and industry in the examinations of the blood.

#### REFERENCES.

(1) Clark, R. M., Brit. Med. Journ., March 28, 1925.—(2) Davidson, T. W., ibid., 1925, i, p. 452.—(3) Gerstmann, Die Malariabehandlung der Progressiven Paralyse, Wien, 1925.—(4) Grant, A. R., Brit. Med. Journ., 1923, ii, p. 698.—(5) Grant, A. R., and Silveiston, J. D., Lancet, 1924, i, p. 540.—(6) Idem., Journ. Ment. Sci., January, 1924.—(7) Nicole, J. E., and Steel, J. P., ibid., January, 1926.—(8) Ross, R., Brit. Med. Journ., 1924, i, p. 130.—(9) Rudolph, G. de. M., ibid., 1925, i, p. 964.—(10) Silverston, J. D., Lancet, 1925, i, p. 737.—(11) Stephens, J. W. W., Yorke, W., Blacklock, B., and Macfie, J. W. S., Annals of Trop. Med. and Parasit., xi, 1921, xiv, iii, p. 365.—(12) Straüssler, E., and Koskinas, Zeits. f. d. ges. Neurol. u. Psychiat., 1925, xcvii, p. 176.—(13) Yorke, W., and Macfie, J. W. S., Trans. Roy. Soc. Trop. Med. and Hyg., 1924, xviii, p. 13.—(14) Yorke, W., ibid., 1925, xix, p. 108.

Blood - Vascular Conditions in Psychoses (1). By ISABELLA McDougall Robertson, M.B., B.S.Lond.

(This communication forms part of a Report to the Medical Research Council.)

In a previous communication (1) I presented certain observations on the leucocytic reactions which occur in the normal and in the psychotic individual following ingestion of milk, and also as the result of various physical and chemical stimuli.

The technique, which is very important, was described in detail. There is, however, one point which requires further emphasis.

Before any stimulus was applied to the subject, two initial counts were taken at intervals of 10 or 15 minutes. In the event of the two initial counts differing a third count was taken, and if leucocytic variations were still noted the experiment was abandoned.

The response to ingestion of 200 grm. of cold milk by 100 fasting normal subjects was a leucocytosis, chiefly a polymorphonuclear leucocytosis, accompanied by either a slight rise or no alteration in the arterial blood-pressure.

The response to ingestion of 200 grm. of cold milk by 90 fasting subjects, all of whom were well established cases of mental disorder, was a leucopenia in 88%, a leucocytosis in only 11%. This leucopenia was accompanied by a fall in blood-pressure in over 50%, and in the majority of the cases there was an absolute and relative decrease of polymorphonuclear leucocytes, a relative and in some cases an absolute increase of lymphocytes, and an absolute and relative increase of large mononuclears.

The third group of subjects comprised 275 early psychotic cases, varying from the milder neuroses to the more acute forms of mental disorder and including a large number of adolescents of the dementia præcox type. In this group 49% reacted by the hæmoclastic crisis, 12.5% showed an indeterminate reaction, and 38.5% reacted normally by a leucocytosis.

The fact that physiological leucocytic variations do occur has caused certain observers to conclude that the leucocytosis or leucopenia noted after milk is merely the expression of the phase of the normal leucocytic curve at the time the test is done. The leucocytic changes have recently been investigated by Dr. A. F. Bernard Shaw (2), who does not consider that either a digestion leucocytosis or a digestion leucopenia does occur.

The reaction he obtained in normal persons after ingestion of milk he divides into four groups: (1) leucopenia, (2) no effect, (3) leucocytosis, (4) paradoxical.

<sup>(1)</sup> A paper read at the Quarterly Meeting held in London, February 10, 1926.

The subjects examined numbered 23, of whom 8 were tested once, and 15 two or more times, usually on successive days. The total examinations made were 40, and taking these as a basis, there was a leucopenia 20 times (50%), leucocytosis 7 times (18%), and no effect 13 times (32%).

The first three groups consisted of 17 subjects. Of these 9 reacted by a leucopenia, 5 showed no effect, and 3 reacted by a leucocytosis. In each of the 9 subjects who were subsequently examined a similar type of reaction was obtained, a leucopenia 5 times, no effect twice, and a leucocytosis twice.

His table illustrating paradoxical results contains figures derived from 6 cases. In 3 cases a leucopenia was obtained on one occasion, and no effect on another occasion. In a fourth case a leucopenia was noted on the first occasion and no effect on two subsequent occasions. A fifth case on one occasion showed no effect, and subsequently a marked leucocytosis. The last case, which on two occasions reacted by a leucopenia, on a third occasion showed the following figures: 6,000 (initial), 10,000 (20'), 5,300 (40'), 4,600 (60'). This last reaction is similar to the reactions which I have called indeterminate, and in 50% of which I have obtained a leucopenia on later examination, and which I have therefore included amongst the cases which reacted to ingestion of milk by hæmoclasia.

The reaction of 6 normal subjects to local application of cold was investigated, with varying results. The results of my own investigations on the local application of both heat and cold have shown that the effect of heat is to cause a leucocytosis, but that if the heat be sufficiently intense a leucopenia will occur, and similarly the effect of cold is to produce a leucopenia, but that if the cold be prolonged, a leucocytosis will be produced.

The reaction of 7 normal subjects to 400 c.c. of distilled water was a leucopenia in 6 and a leucocytosis in the seventh. My investigations on the effect of ingestion of 200 grm. of water showed negligible variations of the leucocytic level, either in the normal or pathological subject.

As the result of investigations on the leucocytic variations during physiological rest, Shaw concludes that leucocytic equilibrium is not necessarily maintained in the absence of alimentary stimulation. His figures show that during the first hour a fall occurred in 3 cases, a rise in 1, and in 6 the leucocytic content remained stable. Consequently he considers "that there is neither a 'digestion leucocytosis' nor a 'digestion leucopenia,' the results recorded as such in the literature on hæmoclasia being simply the expression of the phase of the normal curve at the time the test is done, a

descending phase being registered as a leucopenia and an ascending one as a leucocytosis."

I should like to draw attention to certain figures I have quoted from this paper. Following ingestion of milk, in 50% of the normal subjects a leucopenia was noted, in 18% a leucocytosis, and in 32% no effect, whereas consideration of the leucocytic variations during physiological rest shows a leucopenia in only 3 cases, or 30%, and an unchanged leucocytic level in 6 cases, or 60%.

Feinblatt (3), as the result of an investigation on the alimentary leucocytosis in 80 healthy students, found a definite leucocytosis in all of them. Wilson (4) also records a leucocytosis within one hour in 30 students after 200 grm. of milk. In my own series of 100 normal subjects, I always found a well-marked leucocytosis, though in a few cases it was comparatively slight.

That physiological leucocytic variations do occur both in the normal and in the pathological subject is beyond doubt. There is also evidence to show that the leucocyte count may be affected by psychic and emotional disturbances, and that these variations may be both rapid and intense. But in spite of these facts, it is possible with a sufficiently accurate technique, and under experimental conditions where every cause of disturbance is reduced to a minimum, to obtain leucocytic equilibrium during the course of one hour.

From a consideration of the figures I have quoted I remain unconvinced that the work of Dr. Shaw and of other critics has in any way detracted from the fact that the hæmoclastic crisis is a specific leucocytic reaction.

### HÆMOCLASIA AND ENCEPHALITIS LETHARGICA.

Amongst the early psychotic cases at the Maudsley Hospital were 15 cases of encephalitis lethargica. In 13 of these cases a definite hæmoclastic crisis was obtained, the remaining two reacting normally by a leucocytosis. These findings are in agreement with those of most observers who note the occurrence of the hæmoclastic crisis both in cases of encephalitis lethargica and paralysis agitans. A further group of 8, 4 women and 4 children, all of whom were undoubtedly cases of encephalitis lethargica, was selected for investigation. This investigation consisted of repeated examination, on several days, of the leucocytes of these cases following ingestion of 200 grm. of milk, the effect on the leucocytes of the administration of hyoscine, the effect of hyoscine on the hæmoclastic crisis, and finally the effect of adrenalin on the hæmoclastic crisis.

In addition a group of 6 children suffering from chorea was

similarly investigated, for comparison with the results obtained from the encephalitic children.

The following table gives the results of the ingestion of milk on the leucocytes of these cases.

		Initial	counts.	20'.	40′.
	( I.	(5,850)	5,950	5,250	4,950
Encephalitic	2.	(4,900)	4,950	4,650	4,000
chi <b>ldren</b>	3.	(7,750)	7,650	7,650	6,900
	١4.	(6,800)	6,850	6,850	6,950
	( 5.	(11,200)	11,000	5,850	7,550
Encephalitic	6.	(12,000)	12,300	12,300	9,100
cases (women)	7.	(10,900)	10,750	9,250	9,300
	l 8.	(12,400)	12,400	12,800	11,150
	ſI.		8,300	9,400	9,850
	2.		8,100	9,600	8,800
Chorea cases	3.		12,050	9,750	10,300
(children)	4.		7,800	9,750	8,750
	5.		5,800	5,600	6,050
	l 6.		7,050	6,550	6,900

The actual figures varied on different occasions, but a similar type of response was obtained in the same subject on successive days. In none of the encephalitic cases was a leucocytosis obtained, though one case on one occasion showed no change, and on two other occasions a leucopenia. A definite leucocytosis was obtained in 3 of the chorea cases, a definite leucopenia in one, no change in 1, and in the remaining case the leucocytes were slightly decreased after 20 minutes, returning to the original level after 40 minutes, s.e., a rather indefinite hæmoclasia occurred.

Glasser (5), and Schiff and Stransky (6), have shown the occurrence of hæmoclasia in a certain percentage of normal children and infants, and the occurrence of the leucopenia in the two choreic children is not abnormal. The occurrence of a leucopenia on practically every occasion in the encephalitic children, however, definitely exceeds this percentage.

The effect of subcutaneous injection of hyoscine on the encephalitic cases resulted in a leucopenia in all but one. In this one case, a child, it was followed by a slight leucocytosis.

In the chorea cases, the effect of administration of hyoscine was a well-marked leucocytosis in 4, a slight leucocytosis in one, and a leucopenia in the sixth case.

The tendency, therefore, is for the effect of hyoscine to resemble that of the response to milk in each case, but this does not hold absolutely. The effect of hyoscine on the hæmoclastic crisis was then observed. Immediately following the ingestion of milk a subcutaneous injection of hyoscine was given to the subject, and the leucocytes counted 20 and 40 minutes later, the initial leucocytic level having been previously noted. In only one of the encephalitic women was a reversed reaction found, though in two others there was a tendency towards reversal, while the fourth was entirely unaffected. Following administration of hyoscine, 2 of the encephalitic children showed a reversed type of reaction to ingestion of milk, while the other 2 remained unaltered.

Of the 6 chorea cases, in 4 the reaction was unaltered, and of the two who did show a reversed reaction, one had previously responded to ingestion of milk by a leucopenia, the other by a leucocytosis.

Adrenalin—mij I: 1000 solution of adrenalin chloride—was given subcutaneously to be followed by an increase in the number of leucocytes, to a maximum about 15 minutes after the injection. As in the previous investigation of the influence of adrenalin on the hæmoclastic crisis in dementia præcox, milk was given 10 minutes after the injection of adrenalin. Leucocytes were counted before injection of adrenalin, and 10 minutes, 30 and 50 minutes later. Three days later a similar injection of adrenalin was given, and the leucocytes counted before and 10 minutes after the injection. Milk was then taken immediately by the subject and the leucocytes again noted 20 and 40 minutes later. Comparison of these two curves showed that in every one of the cases of encephalitis lethargica examined, the effect of the adrenalin had been to abolish the occurrence of the hæmoclastic crisis and to replace it by a more or less normal response, a leucocytosis.

## HYDROGEN ION CONCENTRATION OF THE BLOOD.

At Dr. Golla's suggestion an investigation was undertaken to demonstrate changes in the hydrogen ion concentration of the blood, and to correlate these, if any, with the varying types of leucocytic response to physiological and pharmacological stimuli. The hydrogen ion concentration of the blood following ingestion of milk was investigated in a group of normal subjects, and in a group of psychotics who had previously shown a marked hæmoclastic crisis.

This necessitated frequent samples of blood, and a micro-method differing only in a few details from the colorimetric method of Cullen (7), was adopted. The diluting fluid ('9% NaCl plus a sufficient amount of phenol red solution) was rendered CO<sub>2</sub> free and kept in a Pyrex flask under oil. This was renewed each day.

Sörenson's phosphate mixtures were also renewed at frequent intervals. The indicators were prepared daily by adding 0.1 c.c. of the appropriate phosphate mixture to 2 c.c. of the diluting fluid. The tubes used were of neutral glass and of uniform size, 3 in. by in.

The blood was collected, under oil, from the finger. Oil was drawn into the pipette, and 0.1 c.c. of blood was collected in the pipette and a drop of oil drawn up. The blood was then run into tubes containing 2 c.c. of the diluting fluid, covered with oil, and the blood and diluting fluid mixed by stirring with a fine glass rod. The tubes were then filled with oil and gently centrifugalized. The corpuscles settled to the bottom of the tube, leaving a clear fluid, which was matched against the indicators. The accuracy of this method was found to be under 0.02 pH, provided that no air was introduced.

Hawkins (8), who used whole blood instead of serum, and introduced it straight into tubes containing saline and phenol red, states that whole blood and plasma show either no difference or only 0.02 pH. difference.

Blood was collected at intervals of 20 minutes during one hour from fasting subjects, both normal and psychotic. The pH was estimated, and was found to be constant within the limit of experimental error in the same individual.

The pH of the blood was again estimated at intervals of 20 and 40 minutes after ingestion of milk by fasting subjects. Two groups, 4 normal subjects and 4 who showed a marked hæmoclastic crisis, were selected. In both groups the hydrogen ion concentration of the blood was found to remain constant during this time.

# DISCUSSION OF RESULTS.

In a previous communication it was shown that the hæmoclastic crisis does not occur in the normal healthy subject, but that it does occur in a large percentage of psychotics. Analysis of the group of 90 well-established cases of mental disorder shows that 94% were schizophrenic in type, 85% were cases of melancholia, and 75% chronic mania.

In 260 early psychotic and neurotic cases, a hæmoclastic crisis was found in over 60%, it was noted that the greater number of these were psychotic, chiefly of the schizophrenic type, and that most of the neuroses included in this 60% were anxiety forms. Consideration of the subsequent progress of 148 of these cases showed that 55% of the positive cases were reported as worse, 24% were better, and that 70% of the negative cases were reported as better and only 10% worse.

It was pointed out that these figures were probably inaccurate. Consideration of the subsequent progress of many of these cases during a further period, and of many who were not included in the first list, shows that there is very little change in the proportion of cases included under the different headings. The revised list shows that 61% of the positive cases are reported as worse, 22% as better, and that 67% of the negative cases are reported as better, 11% as worse.

The results in both groups of encephalitis lethargica cases show that hæmoclasia occurs in 90% of these cases. This hæmoclasia can be prevented by previous administration of adrenalin. The effect of hyoscine is much less constant, a reversed reaction or a tendency to a reversed reaction being found in only 60%. No correlation, however, was possible between the effect of hyoscine on the hæmoclastic crisis and the clinical effect of hyoscine on the subject.

Another point of considerable interest is that hæmoclasia occurs in 97% of diabetics following ingestion of glucose, but in less than 50% following ingestion of milk. Glucose, however, does not cause hæmoclasia in psychotic cases who exhibit it after milk.

In investigating anaphylaxis it was established that certain phenomena either occurred with or immediately before the onset of the anaphylactic symptoms. The most important of these were a fall in the leucocyte count, a fall in the arterial blood-pressure, hypercoagulability of the blood and a diminution of the refractive index of the serum. The presence of this crisis was demonstrated in asthma, paroxysmal hæmoglobinuria, epilepsy, etc.

Widal (9) suggests that the colloid constituents of the body-fluids are normally in a condition of equilibrium. In a sensitized individual minute quantities of an incompatible colloid, or even a crystalloid, may disturb this equilibrium. This colloidoclasia is accompanied by the changes in the blood described as the hæmoclastic crisis.

The test for liver function arose out of the foregoing theory. It was thought that an impaired liver would be likely to allow imperfectly metabolized proteins to pass into the systemic circulation, that these would be likely to produce a mild colloidoclasia, and that this would be recognized by the appearance of the hæmoclastic crisis.

Widal and certain other workers have demonstrated the presence of the hæmoclastic crisis in practically all cases of liver disease, and consider that the test is specific for liver inefficiency, not for the liver function in general, but for the proteopexic function of the liver. The majority of writers on this subject do not find that the hæmoclastic crisis is a test specific only for liver disturbance, and the balance of opinion, therefore, is against regarding it as a specific liver function test. It is more or less generally agreed, however, that hæmoclasia does occur in anaphylactic conditions.

Anaphylactic shock is not due to a specific poison, but can appear as the result of a physical process. A toxic process is essentially specific. The condition which is produced by antigen, crystalloid, cold, is not intoxication or destruction of the cellular chemical equilibrium, but colloidoclasia, or disrupture of the physical equilibrium of the colloids of the organism.

It has been shown (Schiff (10)) that a marked eosinophilia occurs in the blood during anaphylactic shock, and those workers who have investigated the eosinophil cells during the occurrence of the hæmoclastic crisis have found an eosinophilia, thus emphasizing the similarity of the blood picture during hæmoclasia, and the blood picture which is found following anaphylactic shock.

In both conditions a fall of blood-pressure is generally noted.

These facts, therefore, indicate that there is a marked similarity between hæmoclasia and anaphylaxis.

Another factor of considerable importance is the effect of adrenalin on hæmoclasia. Glaser (5) finds that after an active dose of adrenalin or atropine, the leucopenia following ingestion of milk can be converted into a leucocytosis. He also finds that administration of pilocarpine to a normal subject converts the leucocytosis into a leucopenia. He therefore considers that the cause of the hæmoclastic crisis is a change in the equilibrium between vagus and sympathetic tonus. Stocker (II) also notes that previous injection of adrenalin prevents the occurrence of the hæmoclasia, and considers this to be due to the increased resistance brought about by the raising of the sympathetic tonus by the adrenalin. Similar experimental results and conclusions have been reported by Tinel (12), who concludes that susceptibility corresponds to a special state of vago-sympathetic equilibrium, the vagotonic state exaggerating and the sympathetico-tonic suppressing the influences which produce hæmoclasia.

My observations are in agreement with those findings, as in every case investigated the administration of adrenalin (and atropine, though to a less extent) was to prevent the subsequent appearance of the hæmoclastic crisis.

From a consideration of these facts it would seem reasonable to suggest that in a large percentage of psychotics, especially those of the schizophrenic type, and in a large percentage of the anxiety neurotics, ingestion of milk is followed by a colloidoclasia, the occurrence of this colloidoclasia being dependent on a change in the equilibrium between vagus and sympathetic tonus which occurs in these individuals.

There is, however, another fact of considerable importance. An abnormal response to postural change was found in 87% of the psychotics. This response was purely a vaso-dilation. It was not possible, however, to influence this reaction by adrenalin injection.

In view of the reversal of reaction in response to ingestion of milk by adrenalin, these results with postural change would appear paradoxical if the reactions have the same origin. It may be that the ultimate result may depend upon adequate adrenalin dosage, or that in postural reactions one is dealing with a simple vaso-dilatation and simple volume circulatory disturbance, whereas in the hæmoclastic reaction there is probably a second factor of the nature of a colloidoclasia.

This work has been conducted in the Central Laboratory of the London County Mental Hospitals, Maudsley Hospital, and I would express my indebtedness to the Director, Dr. Golla, for his helpful criticism and advice, and to Dr. Mapother and his medical officers for facilities to examine their cases, and to the volunteers from the hospital staff who have provided me with normal controls.

#### References.

(1) Journ. Ment. Sci., July, 1925.—(2) Brit. Med. Journ., 1925, p. 914.—(3) Feinblatt, Journ. Amer. Med. Assoc., March 3, 1923.—(4) Wilson, Brit. Med. Journ., 1922, ii, p. 1061.—(5) Glaser, Med. klin. Berl., 1922, ii, p. 331.—(6) Schiff and Stransky, Deut. med. Wochenschr., 1921, p. 42.—(7) Cullen, Journ. Biol. Chem., 1922, Iii, p. 502.—(8) Hawkins, ibid., 1923, Ivii, p. 493.—(9) Widal, Presse Méd., 1920, ii, p. 893.—(10) Schiff, C. r. Soc. de Biol., 1921, Ixxxv, p. 40.—(11) Stocker, Zeitschr. f. d. Gesam. Neur. u. Psychiat., 1922, p. 79.—(12) Tinel, Journ. de Méd. et de Chir. pratiques, 1922, p. 84.

Suggestions on the Psychology of Mental Deficiency (1). By HUBERT C. BRISTOWE, M.D.Lond., Medical Officer to Yatton Hall Institution for Mental Defectives, Somerset County Council.

In his *Creative Evolution*, Bergson sets out to prove the thesis that instinct and intellect tend to develop along parallel lines, and that instinct only develops at the expense of intellect, and intellect only develops at the expense of instinct. Though this appears to me to be undoubtedly correct, it does not include the complete truth. For I find on studying the matter more deeply that intellect

<sup>(1)</sup> Being the Presidential Address to the Bath and Bristol Branch of the British Medical Association, June, 1924.

is in fact developed from instinct, along with its twin sister morality, and whilst the development of morality is not inconsistent with the development of instinct, yet intellect and instinct are incompatible.

To appreciate correctly the antagonism of these two, it is necessary clearly to understand what instinct and intellect are. I think it would not be incorrect to say that in its earliest form instinct is pure reflex. Take a unicellular animal: a touch leads to its contraction at that spot so as to escape a potential or actual danger, or to close round a particle of food. Or take a simple multicellular animal, we find a touch which leads to reflex movement in a single cell communicated to all the other cells, and the animal closes, perhaps on a piece of food, and perhaps on nothing-an act of escaping a danger by withdrawal. As we ascend in the animal scale, we find that instinct becomes less obviously reflex, though the reflex nature can generally be traced. Eventually we find in the animal a number of movements and acts for the preservation of the animal or the perpetuation of the race, which on careful examination are seen to be purely automatic. We may perhaps put it that in the higher animals instinct is a racial memory unconscious in character, but essentially automatic or reflex. Intellect commences with the growth of a voluntary inhibition of instinct: the power to decide that instinct may be at fault, and does not necessarily conduce to the safety or happiness of the individual or the future welfare of the race. individual has learned that instinct is not infallible, the power of deciding in favour of or against instinct becomes acquired, and judgment and freewill will follow almost automatically to a greater or lesser extent.

Since intellect is in its essence the inhibition of instinct, it follows that intellect supersedes instinct, which it tends to destroy; and that the more automatic actions become, the less hope there is of the growth of intellect. Hence the antagonism between the two.

There appear to be two primary instincts, and two only, one of which is egoistic, and the other racial. The egoistic instinct is concerned with the preservation of the individual, the racial with the preservation of the race. From the egoistic instinct I hope to show that intellect develops and from the racial, morality. These two instincts are also to a great extent antagonistic; selfishness is at constant war with altruism, and I think it is not far from correct to say that one of these instincts tends to develop at the expense of the other. I have spoken of these two instincts as primary, but in strict accuracy the egoistic instinct is the elder of the two, and is at its commencement a purely reflex action.

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In order to understand how these two primary instincts have developed, and how, as I hope to show, morality and intellect are the natural growth from these two instincts, it is necessary to trace their development up through the lower animals to the human race.

In those lower animals that are devoid of a differentiated brain, we find that the racial instinct is often far more strongly developed than the egoistic. I must perforce leave out of consideration unicellular animals, and others that reproduce themselves by fission and budding, and pass on to some instances where the instinct is so impelling that the race is preserved at the expense of the individual.

There is very little sign of this instinct in the scale of life lower than the insects. The oyster, for instance, lays its eggs, which are washed away in the current of water, and then developed into oysters or lost as the case may be, whilst in the case of the scallop the eggs actually hatch in the shell of the parent, but the young pass into the sea, and after a short life of movement and liberty, settle on their final resting-places. There appears to be but little instinct here. Some insects are only a little better: they lay their eggs in such a place that the young may obtain nourishment, as on the plant on which they feed, or on a dead body, where they can find suitable nourishment, and having performed their allotted task, die and leave the young eggs to nature.

But when we ascend to the bee, the wasp and the ant, we find the racial instinct very highly developed. We will take the honey-There are the male or drone, the female or bee as our instance. queen, and the immature spinsters or workers. The workers, who conduct the business of the hive, appear to take no interest in the individual, except in so far as it conduces to the preservation of the race. They feed the queen and drones, and wait on them until their destiny is fulfilled, and then they sting them to death or otherwise destroy them. On a sunny day the drone seeks the queen on the wing and flies higher and higher, and the one that flies highest mates with the queen, his abdomen splits open, and he falls a corpse to the ground, whilst the queen flies home with his abdominal contents trailing behind her as an oriflame, as Maeterlinck poetically puts it. The drone has obeyed the racial instinct even at the destruction of his own life. And what of the queen? Is her future a much happier one? She simply becomes an automatic egg machine, a prisoner in the hive, and the slave of the workers. All her joy of life ceases that she may continue the bee race. life-histories of the wasp and ant are other cases of altruistic lives.

When we get to the Arachnidæ or spiders we still find a similar altruism, though in this case mixed up in a curious way with the egoistic instinct. The male spider has not got a much happier outlook on life than the drone. As soon as he has fertilized the eggs, his spouse, thinking his life's work is finished, makes a meal of him and effectually puts a stop to any possible attempt at conjugal infidelity in the future. She, as I really think she deserves, gives up her own life after laying her eggs, and never sees her own progeny—another case of that blind impelling instinct which leads to the destruction of the individual that the race may survive, and however powerful the egoistic instinct may be in these cases, it is subservient to the racial.

We next pass on to the vertebrate animals, and we find in the eel very much the same life-history that we find in the spider. The eels we are accustomed to see in streams, ponds and ditches are all spinsters; the male remains in the estuaries. When the spinster eel has become tired of single blessedness, or more accurately, when impelled by instinct, she seeks the male in an estuary, and there mates with him. And, as is the case with the spider, she, having no further use for him as a spouse, makes a meal of him, perhaps her last, and swims out to the mid-Atlantic ocean, where she lays her several million eggs, and dies, herself exhausted by the effort. Once more, impelled by instinct, both male and female lose their lives that the race may continue.

I wonder whether this habit of spouse-eating has any relation to the act of kissing, and the bride simply eats the bridegroom in an access of affection! Who is there that has not heard a devoted young mother, in a transport of love, declare that she "could eat her baby!" With such instances of instinctive immolation on the altar of the race, can we be surprised that Tennyson exclaimed in his "In Memoriam":

"Are God and Nature then at strife?
That nature lends such awful dreams,
So careful of the type she seems,
So careless of the single life."

As we ascend higher in the animal scale, we find that the racial instinct becomes more and more tempered with egoism. The ego makes itself felt, and recognizing its own value, refuses to rush blindly to its own destruction in order that the race may continue.

There are, of course, many instances of animal racial instincts which do not appear to be so definitely reflex, but look more like a process of natural selection (though perhaps natural selection is after all reflex in origin). Take the following very interesting example: There is a bird of the ostrich family living in S. America

called the rhea. The hen lays six eggs, and then the cock bird drives her off the nest and sits on the eggs himself. The hen may lay one or two more eggs, but no notice is taken of them. About one week before the eggs are due to hatch out, the cock bird deliberately destroys three of these eggs. The three broken eggs are rapidly covered with flies, and it is on these flies that the newly hatched birds feed. As the animal scale ascends we find the altruistic instinct is somewhat changed in character. The animal no longer blindly accepts destruction for the benefit of the future race—for a generation yet unborn-but is still willing to accept death in order that the young or females of the race may be preserved. We have here the well-known instances of the mother fighting to the death for its offspring, and the male of a herd fighting for the female and young. The racial instinct has become more one of preservation of that which is, than of that which may be. In some instances, and I think they are of a higher type, we find what we call the herding instinct, the instinct of binding the individuals into a body, band or tribe for mutual support and preservation. And we find the racial instinct still very much in its primitive form, the willingness to accept injury or death for the good of others—the herd.

It is in this form chiefly that it is found in the present evolutionary stage of humanity. The instinct which impels men to join in families, tribes and countries for mutual support against a common enemy. The esprit de corps of regiments is a good instance of that instinct which teaches men that it is not their own individual life which matters, so much as the honour and success of the body of which they are members. To digress, I would ask, when a body of men have been taught to value their own lives highly, their value as fighting men becomes greatly lowered, and it is not until further and higher education has re-valued them more accurately that they again become efficient soldiers. If from any reason this racial or altruistic instinct is wanting, or if it is perverted, moral qualities do not develop properly in the individual, and this want of development is not peculiar to the human race. The following instance is interesting even if it is not conclusive. I have for some years kept ducks in my orchard. A couple of years ago I was rather annoved that my grain bill should exceed the yield of eggs to a larger extent than usual. One afternoon, as I was walking round my orchard with my gardener, I watched the ducks. I noticed that one duck was not with the flock. My gardener told me that he had noticed for some time that she had been keeping aloof from the flock. I went down to the water to see her, and as she walked up from the pond she stopped and picked up something and It was an egg. She had been guilty of an offence against the duck race. I fancy she knew it, and was ashamed, and so kept to herself. But, of course, it may have been that the other ducks avoided her as a sinner against their racial lore. After her death—an untimely one—my supply of eggs was raised to normal.

To my mind this is a clear case of perversion of the racial instinct, and its recognition by the bird or birds concerned, or both. There is one point I must now make quite clear, and that is that I definitely omit from the category of racial instinct the sexual instinct, and place it under the head of egoism. It is in itself a definite and personal endeavour to transmit the personal characteristics and qualities to the individuals of the future race, and is not in itself altruistic.

When we take a broad view of the racial instinct and trace it up from its impelling commencement, we arrive eventually at morality. For what is morality but that impulse which should be in all to preserve the race of which we are members, and to do nothing that can imperil the future health or existence of the race or its individual members? And it is from this racial instinct that the highest altruism is developed. All that is most beautiful and unselfish in life, that we are accustomed to attribute to saints in our own frail human race we find—as we might expect—most highly developed in the females. It follows, then, that if morality develops from the racial instinct, the want of that instinct means the absence of morality; if congenital, moral imbecility; if in adult life, moral insanity.

The egoistic instinct commences very early in the scale of nature, and is, as I have already said, in its essence reflex. This reflex act we find not uncommon in the vegetable world, as, for instance, in the case of the sundews and the sensitive plant. In the first instance the leaf closes over its victim, which is digested, and nourishes the plant. The latter only shrinks from the touch, and we find that reflex acting more slowly in the case of trees and plants which seek the sunlight at the expense of their fellows.

In the lowest animal forms this egoistic instinct is distinctly reflex in nature, as I have pointed out already in the case of the unicellular animal, or animal, without a differentiated nervous system, and even when we ascend higher in the animal scale and come to those animals with a differentiated nervous system, but without a differentiated brain, as in insects and all invertebrates, we find the instinct of self-preservation is reflex rather than purposeful. No intelligent brain assists in the movements, and where such actions are reflex, it is difficult to believe that pain as we understand it can exist or that it is anything more than inconvenience.

Shakespeare was scientifically in error when he said:

"The poor beetle that we tread upon
In corporal sufferance feels a pang as great
As when a giant dies."

The means of self-preservation differ very greatly according to the physical characteristics of the individual animal. The lower animals simply contract, as the amæba and sea anemone; others, such as the oyster or scallop, simply close their shells; whilst the periwinkle and the snail, together with an animal much higher in the animal scale—the tortoise, withdraw into their shells, and, as far as possible, shut the doors behind them. Other classes of animal by leaving a portion of themselves in the hands of their captors escape into safety. The brittle star-fish breaks off its arms if interfered with. The lobster and crab, when the battle of life becomes too strenuous, leave a claw behind in the clutches of the enemy, and the lizard will leave its tail in its captor's hands. These acts do not show any individual intelligence.

The day-flying insects, as we may so often see, in their attempts to attain liberty, fly towards the light, and not infrequently in their vain attempts batter themselves to pieces against a transparent medium such as glass. Here we have the stimulus of light on the eye leading to reflex movements which cause the insect to fly towards it, and this act being only reflex, is very liable to error. The insect is unable to adapt itself to altered circumstances. The action is reflex in character and shows no trace of intelligence. Another method of trying to escape from danger is the well-known one of shamming death, or in the higher animals of "freezing"—that is of crouching motionless in a definite attitude so as to assimilate with surrounding objects, and become inconspicuous. By these methods the individual escapes destruction, either because he is unnoticed, or because his enemy will not feed on dead animals.

Perhaps one of the commonest of all acts of self-protection is flight, which may just as easily be from an imaginary danger as from a real one. Not infrequently the animal, such as a horse, may flee from an imaginary danger and encompass its own destruction by running into a real one. In vain we seek for the germ of intelligence, but cannot find it. They are automatic acts in the presence of real or imaginary dangers, and are merely reflex. The animal is unable to distinguish between the real and false danger and cannot inhibit its own reflex act. We look from instinctive act to instinctive act and try to find in them a ray of intelligence, and at times we think we discern a gleam or faint flicker, but on further investigation we generally find that that gleam is only a "will o' the wisp" which slips from our grasp just as we think

we have got it. One instance of what I mean will suffice. Adelic penguins of the Antarctic congregate in special breedinggrounds, and during their residence, impelled by instinct, perform certain acts some of which may be disastrous to the hatching out, and to us appear certainly stupid. But towards the end of the breeding season they go in flocks to the edge of the ice, and before plunging in for their swim, they try—as in a game—to push one of their fellows into the sea first, and when one has got safely in, the rest follow. Is this instinctive or intelligent? The fact is the waters swarm with sea leopards—their deadliest enemies—and it is by this means the waters are proved to be safe or otherwise. But to answer the question satisfactorily, we should have to find out whether the same game would be played—for unquestionably they do play games, and enjoy them-in such perfectly safe waters as the London Zoo. We find more intelligence in the dog than in any other animal. But consider him well, and without prejudice. In his natural state he lives by hunting with the pack, and that pack is led by a definite leader. And the pack, as in the hounds of the day, hunt by means of their scent. That is, the dog uses his nose—a very well-developed organ—for his hunting. Now, after innumerable years of domestication, has he got very far away from his original hunting instincts? Is his master much more to him than a glorified leader of the pack? And though in most instances he now lives apart from the pack, does he alter his essential habits? Nature has provided him with excellent eyes and ears, but he still prefers to use his nose and find his way by scent rather than by sight. And here is the point. He has been unable to evolve reason that the methods of the pack are not suitable for modern conditions of civilization. One result often witnessed, unfortunately, is that a dog will run across a crowded thoroughfare with his nose to the ground, exercising its hunting instincts, and is killed or seriously damaged by a passing vehicle. Had he been able to reason, he would have used his eyes and his ears, and probably have escaped unhurt. I wonder how many years or centuries it will take for intelligence to tell him when to use his eyes and ears in preference to his nose!

Although I have spoken rather disparagingly of the intellectual powers of animals, we can see even in them the germ of intelligence, and that germ is most clearly seen in the young of animals, when the brain is still impressionable, but with age that germ of intelligence seems to decay.

And what is this germ of intelligence? It is curiosity, the natural and healthy curiosity of the young animal, and this curiosity springs from the instinct of self-preservation, and though reflex to

a large extent at its commencement, it forms a basis on which intelligence may grow, curiosity itself grows upon the instinct of self-preservation. A young, healthy animal is full of curiosity—it looks into every nook and corner of the place it is living in. He will jump away from anything that frightens him, and will make use of anything for its own purposes, however simple those purposes may be. He lays up in his brain facts he may be able to use later in life. He does, in fact, add to his store of instinct certain facts which he makes instinctive use of in adult age. His own memory adds to his racial memory. No one can, with any stretch of the imagination, call the sheep intellectual, but yet the lamb is a most inquisitive animal, and in infancy adds to his store of useful facts for use in adult age. But so soon as infancy is past, he is content to lead the colourless life of his parents, taking no interest in life beyond his own comfort.

Take the puppy again—how inquisitive it is: it appears to want to make the acquaintance of everyone and everything within reach. Is this good to eat? Is that good to play with? But in this case curiosity does not entirely cease with age, and it continues to acquire facts, though to a smaller extent until ripe old age at length supervenes. But yet, in spite of this curiosity and what it learned from it, it is unable to inhibit those reflex or automatic acts which are instinctive.

Although intellect is in essence the inhibition of instinct, that power of inhibition is only acquired by an evolutionary process, which process starts from curiosity. Curiosity is the dawn of intellect, and without curiosity to build on, intellect could never have had birth. To trace the growth of intellect from curiosity we must consider what is the next step in evolution. The next step, in order, seems to be memory—the capability of storing up in the brain the experiences of the past. This memory—I mean conscious or semi-conscious memory-undoubtedly exists in many of the higher animals, but it is far more powerful in the young animal than in the old, and just as with the human being, the memory for recent events becomes blurred in old age, and finally almost lost; so we find more markedly in animals that memory for recent events hardly appears to exist after the childhood of the animal, and in this way animals differ from man. Memory becomes automatic, and does not appear to be combined with any reasoning power. A young horse, for instance, can be trained in a way that an old one cannot be. He may be taught not to shy at a piece of white paper, but who will undertake to train an old horse to take no notice of it? In my early days of motoring I had to draw up for nearly every horse I passed, and it is only

about fifteen years ago that I had to dismount from an ordinary bicycle for the sake of horses in Pembrokeshire. The lesson was not taught them in early life, and they could not acquire it in later years. All horses of the present day in this country have been trained from early age. In the animal world, then, as distinct from the human, we do not appear to be able to get much farther. We find the first gleam of intellect in the curiosity of the young, and the memory of the facts obtained by means of that curiosity, and it is to the human being that we must now pass for the next stage in the development of intellect, which appears to me to be the power of forming an abstract idea. We have no reason to suppose that an animal is capable of forming such an idea. Indeed, so long as the mother hen has a brood of chickens, or ducklings for that matter, she appears not to be able to distinguish between thirteen and two or three. She cannot count, and abstract and even concrete figures do not appeal to her. It is left for the mentally healthy human being to realize the abstract, and to draw at will mental images of past scenes or objects no longer present. We cannot, of course, put ourselves into the position of the animals, but their acts and behaviour do not lead us to suppose that they have this faculty. The keystone of the whole intellectual arch is voluntary inhibition of the various instinctive impulses the faculty of choosing in the case of two or more instinctive impulses which shall be adopted and the faculty of deciding against acting on any instinctive impulse. We might almost call this reflex. When in the lower animals two or more contending instinctive impulses are operating at the same time, the impulse which is the strongest is acted on, and the others are inhibited by this strong impulse. And we might, perhaps, not improperly say that in the case of man the use of reason may be, after all, only the application of a stronger impulse to inhibit action arising from a weaker one. This, of course, opens up the whole question of free will, a question which cannot be discussed here. There is still one higher faculty belonging to the human being, though its existence has been denied -that of creating in its own brain de novo ideas which are not made up of past memories, and perhaps it is here that some forms of genius may lie.

I must go back for a while to the healthy human child. He has very well-marked curiosity. There is a restless inquiring into everything, an endless fund of questions which is often very difficult even to the highly educated parent or teacher. The child stores up in his brain a vast mass of facts which may or may not be of use to him in later life. He is able later to call up images of the facts observed, either at will or in response to some outside stimulus, and

he can utilize according to the view he deliberately takes of their value. He is a reasoning animal, who can decide for himself what instinctive impulses he shall obey, which disobey, and which divert into other channels for his own uses. He is an intelligent and may be intellectual animal.

I now propose to turn just for a short time to the mentally deficient, and see to what extent these views may be applied to them.

There are two main classes into which mental deficients may be divided—moral and intellectual. It does not at all follow that a moral deficient is intellectually wanting, or that the intellectual deficient is lacking in moral qualities. These two forms of deficiency cannot, therefore, have a common origin; and it appears to me that they are due to an absence or deficiency of one or other of these two primary instincts—racial and egoistic. That for some reason or other, the race memory or perhaps more accurately, either the afferent or efferent portion is involved in the instinctive reflex, wanting.

There are many cases of moral deficients, who in all other respects are normal and are well able to earn their own living, and may even possess a high standard of intelligence. But they cannot be made to understand that they must not do as they like with their own bodies, nor why they should not possess their neighbours' goods. The life and comfort of others is immaterial to them so long as they can satisfy their own desires. They do what they like without regard to the interests of others. The altruistic impulses are wanting, and the egoistic instinct, no longer held in check by the altruistic, runs riot.

As I have tried to point out earlier, the racial instinct is the parent of all morality. And morality is in itself that instinctive guidance which is necessary for the well-being and continuance of the race. The problem of intellectual deficiency is very much the same when we have excluded cases of gross physical maldevelopment, such as microcephalics, Mongolians and deficiency diseases such as cretins; it appears that the egoistic instinct has been partially or entirely interfered with in its transmission from the parent stock. Let us now look back on the qualities which go to build up intellect, and we shall find that the lower the mental grade the more of these qualities are lacking.

There is first of all the statutory idiot, who is unable to take any care of himself, cannot feed himself, protect himself, or make his simple wants known. We find in almost all except the higher grades an absence of curiosity, the child may indeed walk round, touching objects, especially if of a bright colour. But there is an absence of that bright questioning curiosity which we are accustomed to find in a healthy child; and it is often considerably less than we see in a puppy or even a lamb. From curiosity memory is developed, and memory in these cases is very deficient and at times wanting, and often little more than instinctive. Even in higher grades we find that peculiarly human quality, the power of grasping an abstract idea, is almost always lacking. A child will constantly fail in the simplest arithmetical addition, unless the question is in terms of oranges or apples. Then a fair amount of accuracy may be expected.

But I have never yet been able to trace in the mentally deficient that inhibitory power which is almost synonymous with wisdom.

What an insult to a healthy child of four to compare its intellect with that of a mental defective of 16! It is impossible to make a true comparison of this sort, though it may form a useful basis for practical work. Between the degraded statutory idiot and the high-grade deficients we get every type. The lowest is incapable of taking the smallest care of itself, and lacks every instinct which is common to the human being and even to the lower animals. As we descend from the highest grades of deficiency, we first notice the lack of reasoning power, i.e., the lack of the power of inhibition; lower down the scale we find an incapacity to grasp abstract ideas, and then curiosity becomes more or less wanting and finally all power of self-protection.

Moral deficiency is, as one would expect, always present in the lowest mental degenerates.

To sum up, then, morality develops from the racial instinct, and perversion or absence of that instinct leads naturally to the perversion or absence of morality. Intellect develops from the egoistic instinct, and perversion or absence of that instinct is the cause of want of growth of the intellect. I have purposely avoided touching on the domain of metaphysics and questions too wide for a paper of this sort. I have also avoided using words of recent introduction into the literature of psychology; as they tend to confuse rather than elucidate the problems before us. I do not pretend to have made any fresh additions to the science of psychology, but have attempted to commit to paper certain explanations of the problems which I have so often before me, and these explanations have forced themselves on my mind whilst studying mental deficients.

### Clinical Notes and Cases.

A Note on the Boltz Test in the Cerebro-spinal Fluid after
Malarial Therapy in General Paralysis. By G. W. T. H.
FLEMING, M.R.C.S., L.R.C.P., D.P.M., Deputy Medical Superintendent, Dorset Mental Hospital.

This test on the cerebro-spinal fluid was first introduced by Boltz (1), who found it almost invariably positive in general paralysis, and negative in the other psychoses. The test is not due to cholesterol by itself, but would appear to be due to either some combination of cholesterol with protein or some modification of cholesterol.

During the latter half of 1925 at the Sunderland Mental Hospital, 13 cases of general paralysis of the insane were treated with induced malaria by the subcutaneous route, the malarial blood being obtained from a general paralytic at the Lancashire County Mental Hospital, Whittingham, to the Superintendent of which our thanks are due. The blood was carried in a thermos in ice and was injected 10 hours after its withdrawal. Of these 13 cases, 3 died before the cerebro-spinal fluid was examined, and of the remaining 10, of which 9 had a positive Boltz test previously, 9 had a negative Boltz after the malarial treatment. One case, A. S—, whose Boltz test was negative previous to treatment, became positive after treatment.

In these 9 cases the change from a positive to a negative Boltz test suggests that as a result of the malarial therapy, apart from any obvious clinical and serological improvement, the paretic process which is responsible for the substance causing the Boltz test had become inactive.

Whether this improvement will be permanent or not remains to be seen.

I am very much indebted to Dr. M. A. Archdale for permission to make use of this material.

The complete results of these cases are being published in the Newcastle-on-Tyne and Northern Counties Medical Journal.

(1) Boltz, O., Amer. Journ. of Psychiatry, July, 1923.

## Medico-Legal Notes.

#### HARNETT v. FISHER.

This case was tried, before Mr. Justice Horridge and a special jury, on April 13 to 20. It was a sequel to the case of Harnett v. Bond and Adam, which was fully reported in the volume of this Journal for 1924.

The plaintiff, Mr. William Smart Harnett, was certified insane in November, 1912, by Dr. Penfold (now deceased), of Newington, and Dr. Henry Holdich Fisher, of Sittingbourne, Kent, and was removed to a private mental hospital. The plaintiff claimed damages against Dr. Fisher for alleged negligence in certifying. appears that the first certificate was given by Dr. Penfold, who then asked Dr. Fisher to see the plaintiff for the purpose of giving the second certificate. The two doctors met and had a consultation. Dr. Fisher saw the plaintiff gesticulating in the street, followed him, and had a short conversation with him. He was unable to recall the details of this conversation; the fact that more than thirteen years have elapsed must be remembered. He had not pressed his questions, in order that the plaintiff might not become more excited than he actually was at the time. The facts which indicated insanity, as set out on the certificate, were that the plaintiff rambled about religious matters, that he said he had a call to rescue persons in the Borstal institutions, and to draw everybody to Christ, and that he was deeply steeped in sexual topics. It was contended, on behalf of the plaintiff, that these statements were untrue, and that, even had they been true, they did not justify the certification of the plaintiff.

The plaintiff gave evidence. He denied that he had said anything about having a mission to save souls, but admitted that he would preach if asked to do so, and that he had the intention of writing a book on sexual ethics. Medical evidence was called on behalf of his case. Dr. Theophilus Hyslop did not consider that the facts set out on the certificate were sufficient to show that the plaintiff was a proper person for care and treatment in an asylum. Dr. Risien Russell took the same view. Various lay witnesses were called to testify to the plaintiff's sanity at the time in question.

The defendant detailed the facts which have been briefly set out above. Medical evidence was then called in support of this side of the case. Dr. Adam, of Malling Place, who received the plaintiff after his certification, was quite satisfied that he was insane at the time, but he did not think that the facts set out on the certificate were very strong. Dr. Ludford Cooper, who saw the plaintiff

shortly before the certification, was of opinion that he was then of unsound mind. Dr. Edwin Stephen Passmore, under whose care the plaintiff was passed in 1913, was of a similar opinion. Dr. Porter Phillips considered that it might be wise, in some cases, not to excite a patient by questioning him, and that observation of his customs, language and conduct, taken in conjunction with the facts communicated by others, might be enough for the purpose of certification. Colonel Richard Locke, the magistrate who made the reception order, stated that he had felt no doubt as to the plaintiff's insanity.

Much stress was laid upon the questions which should be put to the patient in such a case. It is rather curious that the case of a patient who will not speak at all does not seem to have been put to any of the medical witnesses.

The judge left two questions to the jury: (1) Was Mr. Harnett insane on November 10, 1912? (2) Did Dr. Fisher use reasonable care in certifying him? The jury answered both questions in the negative, and assessed the damages at £500.

A legal argument followed as to whether the action was not barred by the Limitation Act, 1623, which limits the period during which such an action can be brought to the term of six years after the alleged injury. It was contended that this statute did not apply in this case, because the plaintiff was non compos mentis—a condition which specifically exempted a suitor from the operation of the Act. The judge ruled that the jury having decided that the plaintiff was of sound mind in 1912, he (the plaintiff) did not come within this exemption. Another exemption had originally been the case of imprisonment, and it might have been contended that Mr. Harnett had, for this purpose, been imprisoned. This part of the Act has, however, been repealed by a later statute. The judge held, although with apparent reluctance, that Dr. Fisher was protected by the Limitation Act. The effect of this ruling was a verdict for the defendant. It was also contended that Mr. Harnett's detention was brought about, not by the act of Dr. Fisher, but by the judicial act of the magistrate who signed the reception order. The judge, however, ruled that the making of the order was not the intervention of a fresh, independent cause, and that the defendant was liable for the consequences of his act.

We cannot but regard the result as unsatisfactory. On the one hand, we must all sympathize with Dr. Fisher in having such an action brought against him after the lapse of so long a period of time. On the other hand, there will probably be many who consider that Mr. Harnett has been deprived, by a legal technicality, of damages which the jury had found (whether rightly or wrongly

we are not here concerned) were his due. The obvious lesson of the case is that practitioners who are called upon to certify in such cases should take heed that their examination of the alleged lunatic is sufficiently complete to stand subsequent investigation, and that the facts placed by them on the certificate contain definite and sufficient evidence of such unsoundness of mind as would justify the patient's restraint. The case can only strengthen the already apparent, and natural, reluctance of practitioners to certify, even in the very clearest cases. Ultimately this cannot but operate adversely to the general welfare of society.

#### REX v. GEORGE SHARPES.

This case was tried at Warwick Assizes, on March 9, before Mr. Justice Shearman. The prisoner was a farm labourer, aged 19 years, and he was accused of the murder of Mrs. Mary Crabtree, the wife of his employer, on January 13. Sharpes had been an inmate of a reformatory school. He had been employed by Mr. Crabtree on a farm in Cheshire, and on the latter moving to another farm, at Ladbroke, in Warwickshire, Sharpes came there also.

The actual facts of the case were not disputed, the defence being that of insanity. The prisoner had murdered Mrs. Crabtree by striking her on the head with a hammer, thus fracturing her skull. A few minutes later he was seen by a girl, who, noting that he had blood on his hands, asked him what he had done. He replied, "I wonder what I have done." Soon after this he inflicted a wound on his own neck, and was removed to a local hospital. While there, he wrote a confession, which was read at the trial. In this statement he said, "Something entered my head in the morning to kill Mrs. Crabtree, and the thought kept worrying me all the morning. She passed as I was working at the wall. I struck her on the head. I tried to clear up the mess with my cap. Mrs. Crabtree told people that I had been in a reformatory."

Very little evidence was adduced in support of the plea of insanity. It was stated that the prisoner was born as the result of a long and difficult labour, that he had complained of headaches, that he was of weak physique, and that he had certain physical deformities.

Dr. Hamblin Smith, the Medical Officer of Birmingham Prison, stated that the prisoner was of average intelligence, and had shown no signs of insanity.

Counsel urged that there was just that small degree of motive which would not affect a healthy mind, but which might affect an abnormal mind. The motive was that the accused had an obsession that Mrs. Crabtree had done him a wrong by telling people that he had been in a reformatory.

The judge, in summing up, said that the question for the jury (and for the jury alone) was not whether the accused was abnormal, but whether he was insane. A verdict of "guilty" was returned, and sentence of death was passed.

As in practically all murder cases, the matter was taken to the Court of Criminal Appeal. It was contended that the judge's ruling that the question of "abnormality" could not be considered, was wrong. Counsel for the prosecution were not called upon. The Lord Chief Justice, in giving judgment, said that there was a fact in the case which had not come up before. The appellant had set out his grounds of appeal in a remarkable document. It was a reasoned argument in support of the conclusion that he was insane, well put together, clearly expressed, and in logical and chronological sequence. Not the least important part was the last sentence, in which the appellant had said, "I did not intend to kill Mrs. Crabtree, but only to stun her, and then take advantage of her." If that statement was to be accepted, it confirmed the righteousness of the jury's verdict. No fault could be found with the judge's summing-up. The appeal was dismissed.

The Home Secretary did not interfere with the sentence, and the prisoner was duly hanged. Whether the second statement recorded the actual motive for the crime, or whether it was an after-thought, must remain a subject for speculation.

## Occasional Notes.

THE LATE SIR FREDERICK W. MOTT, K.B.E., F.R.S.

Prefacing our comments in April, 1923, on the retirement of Sir Frederick Mott from the service of the London County Council we stated that it was happily not the occasion for a funeral oration, nor did it connote a cessation of his wide activities in the world of neurology and psychopathology which had distinguished his career.

To our great sorrow, on June 8 the latter came to pass, and his panegyric has been spoken by that great master in physiology, Prof. E. H. Starling, in eloquent words, descriptive of a career devoted primarily to the elucidation of the age-long mystery surrounding the relationship of mind and matter, and then to the

ætiology, prophylaxis and cure of mental disorders. How far Mott succeeded in all these directions remains to be seen, for the full fruits of much of his labour are still to be gathered. His monumental work in several directions will influence generations of neurologists and psychiatrists to come, and rank with that of the greatest scientists of his age. The striking way in which Prof. Starling unfolded Mott's life-work and aspirations excited the admiration of all who heard him, and can only be likened to the growth of a flower—from the mystery of the bud to the full revelation of the bloom in its strength, sweetness and beauty. We are happily able, through his courtesy and kindness, to reproduce the full text of his address for our readers' perusal.

There remains therefore for us but little to do on this sad occasion, except to say that the Association mourns the loss of an honoured President and modern psychiatry one of its greatest forces.

We extend our sincerest sympathy and condolence to Lady Mott, whose devotion and constant care preserved her husband to us for many years and to her gifted family, of all of whom Sir Frederick was justly proud.

The Association as a whole will pay its tribute to its late President at the annual meeting to be held this month, which will be duly recorded in these pages.

For future reference the following are the principal personal details of Sir Frederick Mott's life:

Frederick Walker Mott was born October 23, 1853, at Brighton. He was educated at University College Hospital, London, and after qualifying as M.B., B.S.Lond., 1881, he studied pathology in Vienna. He took his M.D. and M.R.C.P in 1886, his F.R.C.P. in 1892, and was elected F.R.S. in 1896.

In 1883 he was appointed Assistant Professor of Physiology at Liverpool, leaving this post in 1884 for a similar one at Charing Cross Hospital Medical School. In 1888 he was appointed Medical Registrar and in 1891 Assistant Physician to the same hospital, and in 1894 became full Physician. In 1900 he became Lecturer in Pathology and gave up his physiological and anatomical post. In 1907 he became Lecturer in Medicine and Neurology. In 1895 he was appointed Pathologist to the London County Mental Hospitals and Director of the Pathological Laboratory at Claybury Asylum. He afterwards became Consulting Physician of his hospital. At some period of his life he delivered the Huxley, Croonian, Oliver-Sharpey, Chadwick, Bowman, Morison, Maudsley and other special lectures, and finally the Harveian Oration.

He gained the Stewart Prize in 1903, the Fothergill Gold Medal and the Moxon Gold Medal.

He was closely connected with the work of the British Medical Association, and took a prominent part at their annual meetings.

He received the honorary degree of LL.D. from the Edinburgh University in 1914, and was elected President of the Royal Medico-Psychological Association 1925-1926. Perhaps of all the recognitions of his work the latter two most pleased him

He was a Brevet Lt.-Colonel, R.A.M.C.(T.), and served throughout the period of the Great War as Neurological Specialist. He was created K.B.E. (Mil. Div.) in 1919.

He resigned his post under the London County Council in March, 1923, and LXXII.

became Honorary Director of the Pathological Laboratory of the Birmingham City Mental Hospitals and Lecturer on Morbid Psychology at Birmingham University, and was taken ill while on his way to his duties at the latter city.

He died June 8, 1926, and was cremated June 11, at Perry Barr Crematorium, Birmingham. The Bishop of Birmingham gave the address.

He thus died as he had always lived—in harness—a great teacher, a sound physician and a good friend, guide and counsellor to many.

A very large congregation assembled on June 16 at 12.30 p.m. at the Church of St. Martin-in-the-Fields for a service in his memory. Every branch of the medical and surgical professions was represented, together with University College, Charing Cross Hospital, Westminster Hospital, the London County Council, the Royal Medico-Psychological Association, and many other societies with which Sir Frederick had been connected.

The service included the hymns "Lead Kindly Light," "O for a closer walk with God," and "O God our Help in ages past," as well as the elegy, "All fair and fragrant his fame."

He married, in 1885, Georgiana, daughter of the late Mr. G. T. Soley, by whom he had four daughters.

The Departmental Committee on Superannuation of Local Government Officers.

Memorandum of the evidence given by Alderman Francis Bate, O.B.E., J.P., representing the Mental Hospitals Association, before the above Departmental Committee on March 25, 1926, supported by Dr. R. Worth, O.B.E., representing the Royal Medico-Psychological Association, Mr. W. Morgans, representing the Association of Clerks and Stewards of Mental Hospitals, Mr. Geo. Gibson, The National Asylum-Workers Union.

I represent the Mental Hospitals Association, of which Body I am immediate Past Chairman, and a Member of the Executive Committee.

This Association represents about 80% of the Governing Authorities maintaining Public Asylums in England and Wales.

Supported by the gentlemen whose names appear above I also speak on behalf of—

The Royal Medico-Psychological Association, which was founded in the year 1841, and includes among its members most of the leading medical men and women in the British Isles who specialize in the treatment of mental disorders, Medical Officers in practically every Mental Hospital in the United Kingdom, and also a growing number of medical men in other parts of the Empire. Its Membership is now over 750 in number.

The Association of Clerks and Stewards of Mental Hospitals, which represents 70% of all grades of the clerical staffs employed, and about 95% of principal clerical officers (i.e., Clerks, and Clerks and Stewards), and—

The National Asylum-Workers' Union, which has over 11,000 members, mainly nursing staff in England, Scotland and Wales,

of which 260 are members of the Officers' section, and over 4,000 are female members, spread over 128 Institutions.

It will be seen by the foregoing that this evidence is submitted by Bodies fully representative of those to whom the provisions of the Asylums Officers' Superannuation Act, 1909, apply.

The Bodies we represent have met in Conference, and are of unanimous opinion that a separate statute to provide for the Superannuation of Asylums Officers and Servants should be retained, and that no general Superannuation Act could be satisfactorily adapted to meet the exceptional circumstances of the Asylum Service, the nature of which is comprehensively summed up in the following extract which we quote from the Report of the Select Committee on the Asylums Officers' (Employment, Pensions, and Superannuation) Bill (1911) (page iv, para. 5):

"No one will deny the special stress and strain of Asylum Service. It may be admitted that some part of the work— walking out with quiet patients, for example, or joining in games and entertainments with them—may be neither physically arduous nor even exacting, except for the element of the incalculable in dealing with the mentally deranged. But there is the atmosphere of lunacy all the time. Much of the work is tedious, monotonous, wearing, not free from indignities and some personal risk." . . . "The work calls for sympathy, tact, patience, and intelligence of a high order." . . . "Pensions under fair conditions and reasonable hours of duty are needed to attract as good a class of nurse and attendant as can be secured."

Having regard to these admitted facts we do not see that there can be any justification for modifying to the disadvantage of the employees the Asylums Officers' Superannuation Act, 1909, which was especially drafted to meet the exigencies of the service.

Specifically we ask the Departmental Committee to consider-

(1) That the conditions of the Asylum Service are very different from those pertaining to other Local Government Services, and therefore require special recognition, and special treatment.

This point was strongly emphasized by the Select Committee of 1909, who were responsible for the framing of the Asylums Officers' Superannuation Act, 1909, and who reported thus:

(Special Report of the Select Committee on the Asylums Officers' Superannuation Bill (1909), page iii, para. 8):

"Those who are familiar with the daily routine of Asylum administration will not deny that for physical and mental strain, for anxious, tedious and often repulsive duty, and even for risk of actual injury, the care of the insane is unparalleled by any other branch of civil service."

The following views of the Commissioners in Lunacy were, inter alia, quoted by them in support (page iii, para. 6):

- "It is obviously of the first importance to the welfare of the insane to attract well qualified persons to the service of the
- "Asylum and to retain them therein when by the experience they have gained their service has become valuable."...
- "Fair salaries and wages, with the prospect of liberal pensions after disablement or reasonable length of service, offer, we
- "think, the most influential inducements to really suitable
- "persons to enter asylum service and to remain in it as a "permanent occupation."
- (2) That in the interests of the patients it is a matter of vital importance to make the Asylums Service as attractive as possible, so as to obtain and keep a well-trained and sufficient staff. Even under existing conditions this is difficult, and any change which might make the service less attractive would increase the difficulty.
- (3) That one of the great inconveniences with which those who are responsible for the administration of Public Asylums and for the training of the Nursing Staff have to contend is the migratory tendency of the Junior Staff. The Asylums Officers' Superannuation Act, 1909, was drafted to impose a check upon the constant change of staff, so exceedingly detrimental to the welfare of the patients.

We are of opinion that the return of contributions on voluntary resignation, as is provided by the Local Government and Other Officers' Superannuation Act, 1922, would be to the disadvantage of the Asylum Service.

- (4) That it would appear that under the provisions of the Local Government and Other Officers' Superannuation Act, 1922, varying rates of contribution might be in force in different parts of the country, and we fear that the difficulty in securing suitable candidates would be increased in those districts where the rates of contribution were high, with the result that efficient administration of Asylums in such districts would be likely to be impaired.
- (5) That service of an Institutional character such as the Asylum Service, and the arduous nature of the duties, necessitates retirement at an earlier age than that provided in the Local Government and Other Officers' Superannuation Act, 1922. This is especially so in the case of women (vide Sir Edward Marriott Cooke's remarks quoted on page vii, para. 18, of the Report of the Select Committee on the Asylums Officers' (Employment, Pensions and Superannuation)

Bill (1911), vis.: "Hardly any woman can stand being in an Asylum from the age of 18 to 55.")

- (6) That in the Local Government and Other Officers' Superannuation Act, 1922, no provision is made for addition of years to the actual number of years served by an Officer or servant in computing the amount of superannuation allowance to which he or she is entitled. Owing to the unusual risk of mental or physical breakdown to which Asylums Officers and Servants are subject, Visiting Committees frequently decide, when considering the superannuation allowances of such cases, that it is only equitable to take advantage of the power granted by Section 2, Sub-Section 3 of the Asylums Officers' Superannuation Act, 1909, and, with the consent of the Minister of Health, add a number of years not exceeding ten to the total service in computing the amount of such allowance.
- (7) That the risk of injury in the Asylum Service is recognized and provided for by Section 2 (4) of the Asylums Officers' Superannuation Act, 1909, which gives power to a Visiting Committee to grant a special superannuation allowance not exceeding two-thirds of the salary, or wages, and emoluments of the superannuated person, or a gratuity not exceeding one year's salary, or wages, and emoluments, to any established officer or servant who is permanently incapacitated for asylum duties as the result of an injury sustained in the actual discharge of his duty, without his own default and specifically attributable to the nature of his duty.
- Section 4 (b) gives power to a Visiting Committee, with the consent of the Local Authority, in the case of an established officer or servant dying (whilst in the service of the asylum) to whom, if he had survived, such a special superannuation allowance might have been granted, to grant to the widow or children a similar annual allowance or a gratuity not exceeding his total contributions or one year's salary, or wages, and emoluments, whichever is the larger amount.
- (8) That it would be regrettable if any measure which would react unfavourably on the improving conditions of the Asylum Service were introduced now that the labours of the Bodies we represent, who have been long striving to secure improved conditions in the treatment of the insane, appear to be meeting with success.

For the reasons above stated we are strongly of the opinion that the application of the Local Government and Other Officers'

Superannuation Act, 1922, even with modifications, to the Asylum Service would work out unsatisfactorily to all concerned. We submit, therefore, that Asylum Service should be regarded as an "excepted service."

(Signed)	FRANCIS BATE
,,	R. WORTH.
,,	WM. MORGANS.
••	GEO. GIBSON.

## Sterilization of Mental Defectives (America).\*

Few people who have not made a study of the subject realize to what extent the sterilization of criminals and mental defectives has been sanctioned by the Legislatures and courts of this country. The recent case of Smith v. Command (204 N. W., Mich. 140, 1925), which upheld the main provisions of the present Michigan statute (1) authorizing the sterilization of mentally defective persons, is one indication of what seems to be a growing popular approval of such statutes. In this case, however, the order of the probate judge for the sterilization of Smith was vacated and set aside because there had been no substantial compliance with the requirements of the statute. McDonald, C. J., says in this case that the Michigan statute "is expressive of a state policy apparently based on the growing belief that due to the alarming increase in the number of degenerates, criminals, feeble-minded and insane, our race is facing the greatest peril of all time "(2).

Laws providing for sterilization in specified cases have been placed on the statute books of twenty-two states (3). The Legislatures of other states have considered the subject (4), and at least two of them have passed laws which were vetoed (5). Such laws in Indiana, Iowa, Michigan, Nevada, New Jersey and New York have been declared unconstitutional (6). Iowa and Michigan have since enacted new laws (7). The New York law of 1912 was repealed in 1920 (8). The latest laws of the other states have not yet been tested in the courts.

Enforced sterilization has been practised by many peoples, usually as a punishment for sexual offences, but it is only within the last twenty years that it has been given serious consideration by our state Legislatures as a eugenical measure.

Some of our state statutes are purely punitive (\*), but the great majority of them are eugenical and therapeutic, or purely eugenical. For these purposes the statutes are made to apply to certain classes

<sup>\*</sup> Reproduced from *The Medico-Legal Journal*, January-February No., 1926; by kind permission of Dr. Alfred W. Herzog of New York.

of people. Those that are punitive of course apply only to criminals, and are usually confined to those who have been convicted three or more times of a felony, or to those guilty of rape or other sexual crimes. The great majority of our eugenical or therapeutic laws apply only to inmates of state institutions, including penitentiaries and state hospitals for insane, feeble-minded, idiots, imbeciles and epileptics. Authority is given to sterilize such inmates when in the opinion of the examining board procreation is inadvisable because their children would have inherited tendencies to crime, feeble-mindedness, insanity, etc., and would be a menace to society. The present Michigan statute even goes to the extent of including those mental defectives who would not be able to support and care for their children (10), and that part of the statute was declared unconstitutional in Smith v. Command as being an arbitrary and unreasonable classification. A few statutes include those inmates who have a disease of a syphilitic nature (11), and some include sexual perverts (12). The more recent statutes are not limited to inmates of state institutions, but apply to all mental defectives found within the state (13). This is probably because some of the older statutes applying only to inmates have been held unconstitutional as being class legislation (14). The present California statute provides in addition that any "idiot" may be asexualized with written consent of parent or guardian. In 1921 the Oregon Legislature passed a law providing that a marriage licence would not be issued to anyone having communicable or contagious venereal disease or very low mentality unless one or both of the couple are rendered sterile (15). Upon being referred to the voters, however, this law was disapproved.

The majority of the statutes provide for the operation of vasectomy on males or salpingectomy on females as the method of sterilization. Vasectomy is a comparatively simple operation, and may be performed without an anæsthetic. Salpingectomy is more serious. Neither requires the removal of any organs or sex glands, and neither destroys sexual desires or capacity for sexual intercourse, but both render procreation impossible (16). Some statutes leave the method to be used to the discretion of the examining board as to what is the safest and most efficient manner in each particular case (17). Some allow castration (18) and some specifically prohibit it (18). The present Michigan statute is the only one to speak of treatment by X-ray.

Under some of the laws the written consent of the parents, guardian, spouse or next of kin is necessary, but under the majority of them no consent is necessary.

The statutes differ in their provisions for administration. Most

of them create a board made up of the heads of different state institutions. This board is assisted by a certain number of physicians and neurologists and passes upon the advisability of procreation after examination of the person and family history of the defective. Some laws provide for a hearing in the state courts, with appeals to higher courts. The present Michigan statute probably goes the farthest in the number of safeguards it throws around the individual by provisions for notice, jury trial, appeal, permanent records, etc.

All the statutes except those that are purely punitive apply to males and females alike. Many of them provide that anyone performing an operation of sterilization other than authorized by the act is guilty of a felony or a misdemeanour.

Recent statistics on the operation of these statutes are not available, but up to March I, 1918, the number of operations performed under these statutes was as follows: California 1,077, Connecticut 12, Indiana 118, Iowa 67, Kansas 3, Oregon 17, Nebraska 25, New York 9, North Dakota 32, Washington I, Wisconsin 61, other states 0. Total 1,432 (20). From 1907 to 1921 in California 2,588 persons were sterilized, and during the same period in the various states a total of 3,233 were sterilized (21).

The first recorded case under any of these statutes was State v. Feilen (22). The Washington statute under which this arose was purely punitive (23). It was held that the operation of vasectomy prescribed was not a cruel punishment such as was prohibited by the Washington Constitution.

The New Jersey statute (24), which applies only to the inmates of state institutions, was held unconstitutional as class legislation (25), for it denies to the individuals of the class so selected the equal protection of the laws guaranteed by the Fourteenth Amendment of the Federal Constitution.

The Iowa statute of 1913 (26) requiring the performance of vasectomy on criminals twice convicted of a felony was held in violation of the Iowa constitutional provision that "cruel and unusual punishments shall not be inflicted" (27). This case was carried to the United States Supreme Court (28), but was not there argued on its merits, for the Iowa statute had in the meantime been repealed.

The New York law (29), modelled after the New Jersey statute, was held unconstitutional (30) by the lower courts before it was repealed on the ground that it was an improper use of the police power because it violated the equal protection clause of the Federal Constitution.

The Nevada statute (31) authorizing the trial court to compel

criminals convicted of sexual crimes to submit to the operation of vasectomy was held to be in violation of the provision of the Nevada Constitution prohibiting cruel or unusual punishments (32).

In 1918 a previous Michigan statute which applied only to inmates of state institutions (33) was held unconstitutional as class legislation (34).

The Indiana Supreme Court has held that an act authorizing the sterilization of certain inmates (35) denied due process because it gave the inmate no opportunity to cross-examine the experts who decided upon the operation, to controvert their opinion or to establish that he was not within the class designated in the statute (36).

Upon considering the decisions in these cases it will be seen that in all probability a statute could be framed that would overcome any objection as to constitutionality. If the measure is not made punitive the element of cruel or unusual punishment is not involved (37). If the statute provides for the sterilization of all persons within the state who present a certain constitutional condition the objection that it is "class legislation" is overcome (38). If proper safeguards are thrown around the individual, with adequate provisions for notice, examination, hearing and appeal, it cannot be objected that due process is denied (39). In view of these observations it is submitted that besides the main provisions of the Michigan statute the present untested laws of Idaho, Oregon and South Dakota would also stand the test of constitutionality.

The advisability of passing such statutes which may be entirely constitutional has been seriously questioned. Since the great majority of the statutes are eugenical they are necessarily based upon two assumptions: (1) That feeble-mindedness, insanity and criminal tendencies are inheritable: (2) that it is possible to determine in a particular case that children procreated by a certain defective will have such inherited tendencies. These are assumptions about which there is difference of opinion. McDonald, C. J., in Smith v. Command, states that "biological science has definitely demonstrated that feeble-mindedness is hereditary" (40). On the other hand, it is stated in a recent scientific work (41) that "there has always been some uncertainty, however, in making a diagnostic distinction between native feeble-mindedness on the one hand and the acquired defect resulting in retardation on the other. uncertainty may always obtain." The prevailing opinion in the principal case goes on to say that the only serious question in the operation of the statute is "whether it can be determined with reasonable certainty" in any particular case that the children of the mentally defective person will have an "inherited tendency to mental defectiveness" (42). It is also argued that there is at present no universal standard which can be applied to such cases. Many scientists are also dubious as to what will be the ultimate result of these sterilization statutes. It is contended that these laws open the door to other and greater evils; that since the sterilization does not in the least interfere with the physical act of sexual intercourse there will be an increase of promiscuous sexual relations, and "the effect would be the exchanging of the burden of feeble-mindedness for the burden of sex immorality and sex diseases" (43).—(Cornell Law Quarterly, December, 1925.)

(1) Pub. Acts, 1923, No. 285, amended Pub. Acts, 1925, No. 71.—(2) 204 N. W., Mich., 140, 145, 1925.—(3) The following is a list of the latest sterilization laws passed by the various states up to May, 1925: California, Stats., 1913, p. 775, amended Stats., 1917, p. 571, see also Penal Code, sec. 645; Connecticut, Stats., 1909, ch. 209, amended Stats., 1919, ch. 69; Delaware, Laws of Del., ch. 62, 1923; Idaho, Laws 1925, ch. 194; Indiana, Laws 1907, ch. 215; Iowa, Code of Iowa, ch. 167, sec. 3361, 1915; Kansas, Rev. Stats., sec. 76-149 to 76-155, 1917; Michigan, supra, n. 1; Minnesota, Laws 1925, ch. 154; Montana, Laws 1923, ch. 164; Nebraska, Comp. Stats., sec. 7059-7063, 1915; Nevada, Rev. Laws, sec. 6293, 1911; New Hampshire, Laws 1917, ch. 181, amended Laws 1921, ch. 152; New Jersey, Comp. Stats., sec. 34-35 to 34-40, 1911; New York, Public Health Law, art. 19, sec. 350-351, 1912; North Dakota Comp. Laws, sec. 11,429, 1913; Oregon, Laws 1923, ch. 194, amended Laws 1924, ch. 198; South Dakota, Laws 1921, ch. 235, amended Laws 1925, ch. 164, see also Rev. Code, sec. 5538; Utah, Laws 1925, ch. 82; Virginia, Laws 1924, ch. 394; Washington, Comp. Stats., sec. 6957-6968, 1921; Wisconsin, Stats., i, sec. 46, 12, 1917.—(4) 5 Ill. L. Rev., 578.—(5) Pennsylvania, Gov. Pennypacker, 1905, Gov. Sproul, 1921; Vermont, Gov. Fletcher, 1913.—(6) Infra, n. 25, N. J.; n. 27, Iowa; n. 30, N. Y.; n. 32, Nev; n. 34, Mich.; n. 36, Ind.—(7) Supra, n. 3.—(8) Laws, 1920, ch. 619.—(9) California, Penal Code, sec. 645; Nevada, supra, n. 3.—(10) Supra, n. 1, sec. 7, subdiv. 2.—(11) California, Iowa, supra, n. 3.—(12) California, Idaho, Indiana, New Jersey, New York, Oregon, Utah, Washington, supra, n. 3.—(13) California, Idaho, Michigan, New Hampshire, Oregon, South Dakota, supra, n. 3.—(14) Infra, n. Michigan, New Hampshire, Oregon, South Dakota, supra, n. 3.—(14) Infra, n. 25, N. J.; n. 30, N. Y.; n. 34, Mich.—(15) Laws 1921, ch. 184.—(18) Medico-Legal Journal, xxvii, p. 134; Surgical Treatment, Warbasse, iii, p. 429.—(17) California, Delaware, Idaho, Indiana, Michigan, Montana, Nebraska, Nevada, North Dakota, Oregon, Washington, Wisconsin, supra, n. 3.—(18) California, Kansas, supra, n. 3.—(19) Nevada, Virginia, supra, n. 3.—(19) Journ. of Amer. Inst. of Crim. L. and Criminology, p. 596.—(21) Langlin's Statistical Summary in Eugenical Sterilization in the United States.—(22) 70 Wash., 65, 1912, 41 L. R. A., 418.—(22) Rem. and Bal. Code, sec. 2287.—(24) Supra, n. 3.—(25) Smith v. Board of Examiners (85 N. J. L., 46, 1913).—(26) Acts 35th Gen. Assem., ch. 187.—(27) Davis v. Berry (216 Fed., 413, 1914).—(28) Berry v. Davis (242 U.S., 408, 1917).—(28) Supra, n. 3.—(29) Osborn v. Thomson (103 Misc. 23, 1018, 160 N. Y. S. -(30) Supra, n. 3.-(30) Osborn v. Thomson (103 Misc., 23, 1918, 169 N. Y. S., 638, aff'd without opinion in 815 App. Div., 902, 1918, 171 N. Y. S., 1094).—(31) Supra, n. 3.—(32) Mickle v. Henrichs (262 Fed., 687, 1918).—(33) Pub. Acts, 1913, Act 34.—(34) Haynes v. Williams (201 Mich., 138, 1918, L. R. A., 1918D, 233).—(35) Supra, n. 3.—(36) Williams v. Smith (190 Ind., 526, 1921).—(37) Osborn v. Thomson (103 Misc., N. Y., 23, 34, 1918); see also Weems v. United States (217 U. S., 349, 1910).—(38) Supra, n. 37, at p. 35; see also supra, n. 25, at p. 53. (3°) Supra, n. 2, at p. 144.—(4°) Supra, n. 2, at p. 144; see also articles by Mr. French Strother in The World's Work July, 1924, p. 556; he claims that with the proper programme of sterilization "at the end of three generations society will have to deal with only an occasional biological 'throw-back.' Crime as we know it to-day would be extinct."—(41) Crime, Abnormal Minds and the Law (Hoag and Williams, p. 31, 1923); see also article by Mr. Clarence Darrow, "The Edwardses and the Jukses," in *The American Mercury*, October, 1925, p. 156.—(42) Supra, n. 2, at p. 144. The dissenting justice speaks of this at some length and gives authorities (pp. 149-150); Mr. Darrow in his article (supra, n. 41) states:

"Mr. Stanley P. Davies, in an instructive and critical analysis of the question published by the National Committee for Mental Hygiene, says, by way of summing up his investigation: 'It is apparent from the foregoing that we can be certain of only one thing at present with regard to the mode of transmission of hereditary mental defects, and that is our uncertainty.'"—(43) Osborn v. Thomson (supra, n. 37, at p. 30); see testimony of the alienists reviewed in the opinion, pp. 26-31.

#### Part II.—Reviews.

Tenth and Eleventh Annual Reports of the General Board of Control for Scotland, 1923 and 1924.

We learn from the Tenth Report that the Board are not in favour of an asylum exceeding 700 beds, and to obviate extensions beyond that number advocate the establishment of observation wards, the boarding-out of all quiet and harmless cases ("The average cost to the ratepayer for a boarded-out lunatic is about half the amount it costs for institutional treatment"—Eleventh Report), and the separating of all mentally defective persons from those who are of unsound mind. Observation wards exist in Glasgow, Paisley and Dundee. (These are run under the Poor Law, and we agree with the finding of the Scottish Hospitals' Commission that all the Poor Law hospitals should be transferred to the public health authorities.) The Board, however, rightly advocate that district boards and directors of Royal asylums should be empowered to establish outdoor and indoor clinics by arrangement with the managers of general hospitals.

There is an interesting report in the Appendix on the methods of treating the insane in France, and the Clinic at Rue Cabanis in Paris is taken as an example of the method pursued in France of using the clinic and asylum in conjunction. The treatment at these clinics as regards hydrotherapy, electricity and massage "is carried out with a zeal and efficiency seldom equalled in this country." There is no limit placed on the number of patients in an asylum; the staffs have an eight-hour day; many of them are married, and "a good deal of feeling" exists between the nursing and medical staffs owing to the married couples of the staff not being off duty at the same hours.

On January 1, 1925, there were 20,850 certified persons in Scotland, 18,398 being certified insane and 2,452 certified as mental defectives—an increase of 9 and 144 respectively. During the year 3,176 were certified insane, 1,541 discharged (recoveries being 33.4%) and 1625 died (9.6%).

Apart from these there were 431 voluntary inmates admitted—mainly consisting of private patients, though a number of parish councils have agreed to forego the Government grant payable to them for certified cases in order to allow of their patients entering the district asylums as voluntary inmates.

There are 13 institutions for the care of mental defectives, though

10% of the present populations of Scottish asylums are mentally deficient, and the Board deprecate the admission of mental defectives to asylums, and would limit it to the temporary care of those defective persons in whom an attack of insanity has supervened. The Board advocate the establishment of a children's ward for cases of encephalitis lethargica in conjunction with observation wards, which have been instituted by local authorities for cases of incipient mental disorder.

There is a visiting dental surgeon attached to the majority of the mental hospitals.

In one hospital there are II female patients who are "carriers" of enteric, and separate accommodation is advocated for them as sporadic cases are still occurring at intervals.

Text-book of Experimental Psychology. Part II: Laboratory Exercises. By CHARLES S. MEYERS, M.A., M.D., Sc.D., F.R.S., and F. C. BARTLETT, M.A. Third edition. Cambridge: University Press. Demy 8vo, pp. viii + 121. Price 7s. net.

It is relatively but few years since experimental psychology, at least in many of its features, was little more than the physiology of the special senses; how much this has changed is revealed by the present volume. The aim of the course is not to observe certain phenomena as an illustration of the statements in the current text-books, but to promote habits of psychological observation, noting everything which may have a bearing upon the results. The student, after each experiment, must record not only a general description, but any features affecting his mental condition at the time and the results as observed both by the experimenter and the subject.

The first section is an introduction to technique, and serves to familiarize the experimenter with giving consistent and comprehensible directions, and the subject with the practice of that introspection without which the procedure might often be of the nature of physiology rather than psychology. The earlier experiments, requiring only suitable material and dealing with free association, perception, recognition, construction and analysis, are more akin to the methods used in much clinical work, but the method of setting shows how they had to have real analysis, and by following them out the student will have observed a wide variety of mental processes, and have learnt how strict a technique is needed to secure consistent and precise conclusions. The second part of the first section deals with quantitative methods and thus introduces the remainder of the work.

Full experiments are described later, expanding the early work and dealing with such phenomena as fatigue, which complicates results. The whole is essential to that knowledge of normal psychological method which must form part of the basis for any advance in the study of abnormal mental processes. Particularly is such a study essential to those who would connect the physiological and psychological, and hope in time to interpret morbid behaviour

in the light of damaged or defective physical structure. It is only by detailed study such as is herein outlined that those who apply methods of association, or of mental measurement of sensory discrimination or muscular accuracy, can really appreciate the accompanying phenomena and thus acquire sympathy and understanding with the reactions of their patients. In experimental psychology, as in psycho-analysis, self-knowledge must precede diagnosis in others: the beam must be known, if not destroyed, before the removal of the mote can rightly be attempted.

F. C. SHRUBSALL.

Collected Papers by Sigm. Freud. [International Psycho-Analytical Library.] 4 vols. London: Hogarth Press. Super Royal 8vo. Price, Vols. 1, 2 and 4, 21s.; Vol. 3, 30s.

In this large collection of the works of Freud the individual monographs have been arranged in such a way that each volume deals with subjects of similar interest. This must have been a matter of considerable difficulty, but the desired result has been attained to a very satisfactory degree.

The first volume (359 pages) deals with the early history and evolution of the psycho-analytical movement, the results of early investigations, and the theories evolved from them. Many of the simpler mechanisms are also discussed.

The second volume (404 pages) contains papers on technique,

and the results obtained in the earlier analyses.

In the third volume (607 pages) are a series of case-histories of many types—hysteria, phobias, obsessions, paranoia, etc.—and a discussion on each type.

The last volume (508 pages) will appeal especially to the metapsychologist. Repression, dreams, the poetic mind, character-formation and demoniacal possession are among the diverse subjects dealt with.

These volumes form a very valuable addition to our psychological literature, and present for the first time a collection of the monographs of Freud in an easily accessible form. The translator is to be congratulated on the excellent manner in which he has carried out his difficult task.

W. Moodie.

Le Roman d'une Épidemie Parisienne. La Kleptomanie? By A. ANTHEAUME. Paris: Gaston Doin, 1925. Crown 8vo. Pp. 228. Price 7 fr.

In England doctors and lawyers are notoriously at variance on the question of criminal responsibility. It is therefore interesting to note that in France there appears to be a better understanding between the two professions on this momentous question. It should, of course, be remembered that circumstances alter cases. When, for instance, a particular form of crime has been allowed to spread like a contagious disease, it is hardly surprising to find even mental experts loudly demanding its suppression by the application of more stringent legal measures.

Dr. Antheaume is a psychiatrist who has had twenty years' experience as a medico-legal expert. For the last few years he has conducted an intensified campaign against what we commonly call feminine shoplifting from the great Parisian stores. In that campaign he has received the whole-hearted support of many of the best-known psychiatrists in Paris. The author asserts that the number of these thefts was considerably augmented on the medical profession accepting kleptomania as a definite entity. This syndrome became popularized more particularly by Magnan and his school. Moreover it was widely disseminated by the Press. The magic word "kleptomania" came to be used as a motive for theft, and numbers of accused persons and even advocates seized on it as a convenient excuse and means of defence by which they might escape from justice. In 1900 thefts of this kind became so numerous as to constitute a veritable mental epidemic, which has continued to rage ever since, though it showed some abatement during the war. To-day it is tending to diminish under the influence of the Press, which has given considerable publicity to two recent communications read by Dr. Antheaume before certain learned societies.

Arguments are brought forward in this book to show that kleptomania is a fictitious disease and a mythical creation of medicine, which should be abolished once and for all from the classification of mental disorders. The author, however, wishes it to be distinctly understood that he does not associate kleptomania with true pathological thefts, e.g., thefts committed by persons suffering from mental enfeeblement, general paralysis, maniacal exaltation, epilepsy, etc.—in short by persons on the borderland of insanity or actually insane.

The author's suggestions for dealing with this Parisian epidemic of shoplifting are twofold: (1) By establishing prophylaxis. Many thefts might be prevented if the management of the stores in question were to organize a more effective surveillance. Instead of plain clothes officials who are kept in the background until theft has actually been committed, they should employ inspectors dressed in a distinctive uniform whose presence would be perfectly obvious to all. This would act as a deterrent to those individuals about to give way to the temptation to steal, for undoubtedly temptation exists in these large stores. (2) By intimidation. The pseudokleptomaniac might be further intimidated by a stricter adherence to legal procedure. Rich or poor, the delinquent should be proceeded against in every case. Some leniency might be accorded to first offenders, who might in many cases be placed on probation. Recidivists and graver cases should, however, be dealt with firmly. The names of the delinquents should be published in the press without exception. Dr. Antheaume would make no distinction between the poor woman who steals in order to feed her children and the rich woman of fashion who steals finery in order to satisfy a whim (kleptomanie à la mode). The latter, having had all the advantages of education and moral training, should not be held less responsible than the poor woman who has had none of these advantages and opportunities.

The author emphasizes the fact that kleptomania is not recognized in London or in any other European capital. In England, he says, there is less crime than in France, the reason being that it is generally realized in this country that legal repression is severe and inexorable. On one point, however, he has been palpably misinformed. Thus he states that he has good authority for saying that corporal punishment is still in vogue in England for certain cases of female shoplifting, and has been largely responsible for the disappearance of this particular offence. Now, though we understand corporal punishment for petty theft was in use as late as the latter part of the eighteenth century, it has long since fallen into disuse in this country. NORMAN R. PHILLIPS.

The Endocrine Glands and Autonomic Systems in Dementia Præcox. By Gabriel Langfeldt. Bergen: J. W. Eidis Boktrykkeri A/S, 1926. Demy 8vo. Pp. 326.

In the present work the author has set himself two problems: (1) To examine whether the hypothesis of dementia præcox as an endocrine disease is sufficiently supported; (2) to examine whether there is a distinct difference in somatic respects between the two main types of dementia præcox, viz., catatonia and hebephrenia.

In order to decide these questions, 40 cases out of the (about 330) patients of the asylum were chosen, where the diagnosis dementia præcox could not be doubted. Of these 40 all cases answering to Kraepelin's description of typical catatonia and hebephrenia were selected, and placed respectively into Group I, catatonic cases, of which there proved to be 16, and Group II, hebephrenic cases, to which diagnosis II cases answered. The remaining 13 cases, that betrayed mixed symptoms, were placed in a Group III—mixed cases.

The characteristics found for the two groups may be thus summed up.

Catatonia.—Essential disturbances (present in the acute as well as the quiescent cases): Slow pulse, low blood-pressure, lymphocytosis, glandular swelling, pilocarpin +, Aschner + (vagotonic signs), reduced basal metabolism. To these must be added in acute phases certain sympathicus signs, such as dilated pupils, tachycardia, exophthalmos, reduced glucose tolerance.

Hebephrenia.—In the acute as well as the chronic phases only sympathicus symptoms—tachycardia, exophthalmos, tremor, dilated pupils, reduced glucose tolerance. These symptoms are, however, found most pronounced in acute phases, where in one case there was also an increased basal metabolism. For the rest, hebephrenia was characterized by a normal basal metabolism and normal blood picture (apart from eosinopenia in the acute phases). To this comes—as characteristic of hebephrenia—large firm testes.

The discussion of these findings leads, as might be expected, to inconclusive results. The work, as in the case of many similar researches, is valuable in furnishing a basis for the future pathology of the psychoses. At present the poverty of our methods of investigation prevents us from assessing the significance of these relatively crude signs of disturbance. The author falls into the general error of talking of states of vagotonia and sympatheticotonia as if they were permanent static conditions. The reaction of the vegetative nervous system to all stimuli is undoubtedly a reversible one. It further may depend on the state of excitability of the vegetative nerve-endings to a clinical stimulus, conditioned either by the activity of the receptor organ or the intrinsic state of the nerve-endings themselves, or the influence of the cerebral centres of the vegetative nervous system. We are not yet in a position to dissect out these various factors, but as long as we recognize our disabilities and devote ourselves to the accumulation of evidence on the lines issued by Dr. Langfeldt we are on a hopeful path. Not the least important of the services that Dr. Langfeldt has performed in this monograph is a very full bibliography of experi-F. L. GOLLA. mental literature on this subject.

Intelligence and Immigration. By CLIFFORD KIRKPATRICK, Ph.D.

Med. 8vo. Pp. xvi + 127.

A Psychological Study of Immigrant Children. By BERTHA M. Boody, Ph.D. Med. 8vo. Pp. 163.

(Mental Measurement Monographs.) Baltimore: The Williams & Wilkins Co., 1926. Price 18s. each net.

In the field of sociological activities there is no factor of such paramount importance as a proper understanding of the relation of heredity and environment. It has been said with truth that while questions of heredity make an appeal to reason, those of environment tend to appeal to sentiment, and it is upon sentiment that much of the social legislation has been based. Hence it has come about that it is only recently that the immigration problem in the United States has begun to be approached from the sociobiological point of view. From the results of the mental tests applied to the American army it was clearly seen that the cultural stages of the immigrants who have for years been pouring into the New World differed in a very marked degree, and that there was a serious tendency for groups, apparently of lower intelligence, to enter the country in the largest numbers.

The result of this discovery has been the Immigration Law of 1924, which attempts to limit the ingress of nationals from countries which appear in the past to have supplied inferior stock, and by literacy and other simple mental tests to refuse admission to those who show a poor or indifferent degree of intelligence.

But for the success of this purpose it is necessary to obtain as accurate knowledge of the facts as circumstances allow, and these two books give the results of certain investigations into different aspects of the problem.

Dr. Kirkpatrick's aim has been to investigate the effects of past immigration upon the intelligence of the present American population, and to discuss the implications of the results of this investi gation. It is gratifying to us to find that the English and Scots, with the Scandinavians and Finns, appear to have supplied the soundest stock to the United States: "On the other hand, the Italians, the Poles and the Russians probably have had a depressing effect on the average American intelligence, and the French Canadians certainly have not raised it. . . . The differences between dians certainly have not raised it. . . . the immigrant stock themselves are significant as suggesting that mental inferiority to American children is not merely environmental in origin." It is an interesting fact that in regard to insanity as a cause for rejection the Irish show the most unfavourable figures of any nation. The conclusion to which he arrives is that "no person should be admitted who does not measure up to the level of social desirability of the average American citizen, save as it may be necessary to make temporary exceptions for relatives of those already here. This would mean that every immigrant would be superior to about one-half of the present population."

Miss Boody's contribution to the subject, while primarily a report of an experimental study made in the school at Ellis Island, contains a very useful summary of the whole problem, with a review of the immigration laws and statistics, and the present procedure of examination of intending immigrants. Attendance at the school is voluntary, and its chief intention is to provide occupation for the children of those who are detained at the Station. Although greatly adding to the difficulties of the investigation, the conditions provide a unique opportunity for the examination of unselected groups of various nationalities, of which no less than twenty-two are represented in the tables. The book forms a plea for a more careful selective progress and the elimination of the unfit from the would-be citizens. The author sums up her conclusions thus: "The smaller number of immigrants arriving, the more careful selection at the source, the lower quotas for races which have come to this country in the last few years in numbers impossible of assimilation, the opportunity for physical and mental examination on arrival, and for greater leisure in getting the facts necessary to determine the fitness of the individual, all give promise of the establishment of improved conditions throughout the country. The process of admitting only that individual who proves his fitness seems surely a safe foundation."

We hear much criticism of the procedure adopted at Ellis Island, but no one can read these two volumes without realizing the immense intricacy of the problem, or without sympathizing with the desire to secure a miscegenation of races as shall in the future form the basis of an intelligent, self-governing and self-supporting democracy.

G. A. Auden.

LXXII. 28

Hysteria. By Ernst Kretschmer, M.D. Authorized translation by Oswald H. Boltz, M.D. Nervous and Mental Disease Monograph Series, No. 44. Nervous and Mental Disease Publishing Co., New York and Washington, 1926. Med. 8vo. Pp. xi + 120. Price \$2.50.

The author's previous literary contributions have shown such keen observation and clinical acumen that we cannot help but feel that herein we shall find matter of value. In this surmise we are not disappointed, and the angle from which he approaches the problem of hysteria is extremely helpful in enlarging our viewpoint. Symptom-complexes, diagnosis and treatment are not described, but we here find an attempt to place hysterical reactions in a biological category. Readers of this Journal will remember that the late Dr. W. H. R. Rivers, in his "Instinct and the Unconscious," put forward hypotheses which linked up the neuroses with instinctive mechanisms.

Kretschmer's clinical experience shows that "hysterical manifestations are predominantly vague, impulsive ways of reaction occurring in simple, primitive, or immature persons, and appear relatively seldom in enigmatic, highly differentiated personalities, possessing intricate richness of experience." The psychogenic source is accepted and the "will to illness" recognized, but the conception is here adopted that such psychogenic reaction-forms are predominantly called hysterical, where a tendency to dissimulation makes use of reflex, instinctive, or otherwise biologically preformed mechanisms.

In the first part of the book the problem of hysteria is considered in relation to the impulsive and instinctive life. A stressful situation in the adult norm is met by purposeful deliberation except under definite severe conditions, but the hysterical reaction is a lower type and is related to the normal human reaction as instinct is to intellect. The violent motor reaction as occurring in animals, in the child, and in panic, is shown to be an instinctive defence reaction against disturbing stimuli, and the hysteric, when the higher pathways for some reason or another are inaccessible, utilizes such an old and dormant pathway. The "sham death reflex of animals, which has close kinship to cataleptic and hypnotic phenomena, is shown to be obviously related to more than one group of circumscribed hysterical manifestations. Such psychogenic motor inhibitions can be noted in stupor, paralyses, spasm, speech difficulties, while such hysterical symptoms as concentric narrowing of the visual fields and analgesia find a parallel in the similar phenomena evoked by the "immobilization reflex." regards many stuporose states in soldiers during the Great War, the reviewer himself theorized on these lines. Astasia-abasia has something instinctive about it, and the frequently seen tendency to hide in bed may be compared with the simple act of hiding in animals. In another group the more or less instinctive tendency to sham may impel the hysteric to make use of optional material as a defence against menacing situations. Thus a healing sciatica

may become a hysterical limp. This conception tends to be confirmed by the large mass of hysterical reactions which group themselves about the impulsive life, having their source in self-preservation and in the sexual emotions. As a result of fright and danger we have reactions closely akin to hysteria, but hysteria in its narrower sense has a secondary aim, and hovers more on the boundary between the instinctive and the rational. There is, however, a constitutional foundation, and hysteria is, above all, a

reaction of "naïve, undeveloped psychic life."

In Part II the psycho-physical dynamics are discussed. It is shown how the hysterical habit-formation comes about, and represents a process which biologically indicates the transition of a voluntary into a reflex nervous function. An interesting chapter follows on the laws of voluntary reinforcement of the reflex, for we are paradoxically forced to assume a "purposeful participation of the psyche in the origin of such disturbances whose forms of expression do not at all lie in the realm of free will." The shaking tremor is to begin with a reflex, then is aggravated, and lastly becomes an illness. The mechanism of affective gain, which is so well known, is very aptly described as "the loading up with the emotional fuel which must continue to keep the reflex machine going." Persons who have reflexes and instinctive reactions which are habitually quite easily impressed, persons in whom emotions are transformed with extraordinary ease and rapidity into physical and psychic automatisms, are above all inclined to hysterical reactions.

Kretschmer then deals with hysterical volition, and it is demonstrated that there are two components with different tendencies. One corresponds to the normal purposive will, while the other (here termed the hypobulic) acts like a foreign body against the entire personality, and reacts to stimuli in a zigzag way either towards blind obedience or tenacious resistance. This latter type of will is the ontogenetic and phylogenetic lower stage of the purposive will, and it may take possession of an individual when sudden mental shock or chronic disharmony of affect brings about a more primitive form of reaction on a lower plane. Hysterics are not, therefore, weak-willed, but weak of purpose. The most strongwilled may be weak in this respect if there is acute situational stress. In the final chapter "the transformations of experience" are discussed in terms of defence, repression, regression, wishfulfilment, and symbolism. Though the book is not lengthy there are many points therein upon which it has not been feasible to dilate. Any reader who desires to broaden his conception of hysteria and not regard it only from a strict and narrow psychogenic point of view should digest these pages for himself. This monograph can be cordially stated to be scientifically stimulating, and of much greater worth than much of the literature provided on C. STANFORD READ. cognate subjects.

# Part III.—Epitome of Current Literature.

## 1. Neurology.

A "Silent" Fibro-Glioma of the Cerebellum in a Paralysed Arterio-Pathic Dement [Fibro-Gliome silencieux du cervelet chez une démente arterio-scléreuse paralysée]. (L'Encéph., May, 1925.) Prince, A.

The case of a true fibro-glioma about the size of a small hen's egg found at autopsy, occupying the left cerebellar hemisphere. No symptoms had been caused. The patient, æt. 74, had extensive arterial disease, with marked and widespread paralysis, and numerous foci of softening were found in the brain. The author thinks this interruption of the motor tracts prevented the tumour causing inco-ordination and other signs, which would have led to its diagnosis.

W. D. Chambers.

A Case which Raises the Question of the Relationship between the Parkinsonian and Hebephreno-Catatonic Syndromes. Psychomotor and Ætiological Peculiarities [Un cas qui pose le problème des rapports entre les syndromes Parkinsonien et hebephrenocatatonique. Particularites psycho-motrices et étiologiques]. (Bull. Soc. Clin. de Méd. Ment., July, 1923.) Bernadou, H.

A man. æt. 55, presents a clinical picture of hebephrenocatatonia of seven years' duration. Particulars as to mode of onset are lacking, but the author describes certain signs and symptoms suggesting Parkinsonism, and considering the advanced age of the patient suggests he is a case of epidemic encephalitis, and that dementia præcox may be due to this infection.

The case was demonstrated, and the meeting decided that the presence of Parkinsonism was not evident.

The author also suggested that lesions of the central nuclei, as in catatonia and Parkinsonism, might cause psychic disorders secondary to kinetic disorders, but in this again the meeting was against him.

W. D. Chambers.

Epidemic Encephalitis with a Respiratory and Hepatic Syndrome [Encephalite lethargique avec syndrome respiratoire et hépatique]. (Journ. Neur. et Psychiat., Num. Neur. 1, 1924.) Van Bogaert, L.

A very detailed study of a case of prolonged encephalitis in a woman, æt. 33. In December, 1919, she suffered from a short febrile attack with muscular pains and fugitive diplopia, and regained perfect health. In August, 1920, she first noticed occasional breathlessness. In September she had a severe attack of jaundice followed for three months by marked somnolence. After this typical Parkinsonism developed, but the most striking symptoms were polypnæa and tachycardia. Respiration varied from 28-42, always less when lying down, and with curiously regular variations, which are fully described.

The author attempts to correlate the respiratory, cardiac and hepatic disorders to the vago-sympathetic system, but admittedly fails to do so.

W. D. Chambers.

Vertical Oculo-motor Crises in Post-encephalitic Parkinsonism [Les Crises Oculogyres Verticales du Parkinsonisme Post-encéphalitique]. (L'Encéph., March, 1925.) Bing, R., and Schwartz, L.

After referring to the permanent ocular sequelæ of epidemic encephalitis, among which it is stated impaired convergence occurs in 70%, the authors describe three cases in which fixation of the eyeballs at the highest point of rotation, associated with extreme elevation of the upper lid, occurred at intervals and lasted a few hours. The fixation was complete, and strong voluntary efforts to lower the eyeballs and close the lids caused only a tremor of the muscles. A photograph showing the condition is included. Similar cases from the literature are enumerated. The authors stress the paroxysmal character of the attacks, which distinguish them from chorea, athetosis and myoclonia, and which is similar to other sequelæ of epidemic encephalitis, such as torticollis. They are to be regarded as release phenomena, and originate probably in the corpora quadrigemina.

W. D. CHAMBERS.

Focal Lesions in Epidemic Encephalitis [Lesions en foyer dans l'encéphalite léthargique]. (Bull. Soc. Clin. de Méd. Ment., April, 1923.) Guiraud, P., and Hémery, A.

Two cases of encephalitis are described in which very marked lesions were found in the brain at autopsy.

(1) Æt. 58. Indefinite pyrexia without distinctive ocular signs or narcolepsy, followed by mental retardation, emotional disturbance and progressive weakness. Later, somnolence became marked, right-sided ptosis and external strabismus developed, and vomiting and melæna caused death.

There was advanced atheroma of the cerebral vessels. The left hemisphere showed foci of softening in the frontal and occipital lobes and the basal nuclei; the right a few smaller foci in the optic radiation and lenticular nucleus. There was definite hæmorrhage around the areas of softening. The microscope showed perivascular proliferation and overgrowth of neuroglia.

(2) Æt. 50. Pyrexia with diplopia and somnolence, followed by sudden left hemiplegia. Diabetes insipidus developed, and the mental state was dream delirium with complete disorientation.

Again there was widespread atheroma, and the meninges were thickened. There was a very irregular loss of substance in the caudate and lenticular nuclei and internal capsule on the right side. The microscope showed small hæmorrhages, peri-vascular proliferation and increase of neuroglia. The ependyma of the ventricles showed granulations, and was in places destroyed. The lesions were very marked near the infundibulum. Unfortunately the hypophysis was not removed.

The authors consider that apart from atheroma, focal lesions may be caused in epidemic encephalitis by thrombosis due to blocking of the vessels by leucocytes.

W. D. Chambers.

Parkinsonian States. (Arch. of Neur. and Psychiat., February, 1926.) Hassin, G. B., and Bassoe, P.

The authors review the literature on the pathology of the Parkinsonian states. With especial reference to epidemic encephalitis they quote Wimmer, who finds the most advanced changes in the substantia nigra and pallidum. The ganglion cell changes are chiefly regressive, and the vessel changes consist of hyaline degeneration of the adventitia, sometimes calcification, and filling of the dilated peri-vascular spaces with lymphocytes, plasma-cells, pigmented cells, macrophages, and various disintegration products.

They then present a summary of their findings in four cases,

and reach the following conclusions:

(1) Parkinsonian states comprise an extensive group of clinical entities with a clinical picture of paralysis agitans.

(2) The anatomic substratum is a lesion of the extra-pyramidal system, mainly the basal ganglia and the substantia nigra.

(3) The character of the lesion may be degenerative only or combined with inflammatory phenomena.

(4) The former is present in the classic paralysis agitans, and combined with the latter in post-encephalitic states.

(5) The two groups are different pathological entities.

(6) The involvement of certain components of the extrapyramidal system may be due to the time element and the underlying ætiology—infection in post-encephalitic states and vascular or senile parenchymatous changes in the other.

WM. McWilliam.

Sequelæ of Encephalitis Lethargica. (Journ. Neur. et Psychiat., Num. Neur. 2, 1923.) Decroly.

Dr. Decroly demonstrated the case of a boy æt. 16 who had been ill for one and a half years. The illness began with fever, and was soon followed by hemiplegia on the right side and speech difficulties. The febrile stage lasted for five weeks; later a tremor appeared in the right hand, of the type seen in paralysis agitans. The usual physical signs are described. A note is made on the mental state, and treatment along re-educational lines is discussed.

J. S. IAN SKOTTOWE.

Tumour of Spinal Cord [Tumeur de la moelle]. (Journ. Neur. et Psychiat. Num. Neur. 2 1923.) Mativa.

Dr. Mativa describes a case of a woman, æt. 43. The signs were those of spastic paraplegia, with impairment of sensation up to the nipples. The tumour was found to be, on operation, a fibromyxoma. The patient recovered.

J. S. IAN SKOTTOWE.

Reports of Syphilis with Nervous Illness [Rapports de la Syphilis avec les maladies nerveuses]. (Journ. Neur. et Psychiat., Num. Neur. 3, 1923.) Crocq.

Dr. Crocq goes into this matter at length, and expresses the following opinions:

(1) Hereditary or acquired syphilis can give rise to almost any nervous symptoms. Examination of the blood and cerebro-spinal fluid should be done in all cases showing nervous symptoms.

(2) The symptoms may be due to the effects of the organism itself or to its toxins. The theory of the *locus minoris resistentiæ* is insufficient; the idea of neurotropic virus receives strong support. Treatment along the usual anti-syphilitic lines is advised. In the same discussion Dr. Jacque and Dr. Decraene take up specially the mental illnesses associated with syphilis, particularly in regard to the anti-social acts which may result from general paralysis, syphilitic mental defectives and moral imbeciles.

They discuss treatment along prophylactic lines, and are particularly strong against the use of alcohol by syphilitic subjects.

J. S. IAN SKOTTOWE.

The Thalamic Syndrome [Syndrome Thalamique]. (Journ. Neur. et Psychiat., Num. Neur. 4, 1924.) Leroy, A.

Dr. Leroy gives a full description of the case of a woman, æt. 42. He distinguishes the syndrome by the presence of the following symptoms:

(1) A degree of hemiplegia with contracture and showing rapid

remission.

(2) A persistent superficial hemianæsthesia replaced in certain cases by hyperæsthesia and disturbance of deep sensibility.

(3) Hemiataxia and asterognosis.

- (4) Intolerable pains on the affected side not yielding to treatment.
- (5) Choreo-athetoid movements in the limbs of the affected side. He compares his case with the standard syndrome, and discusses the anatomical changes.

  J. S. IAN SKOTTOWE.

# A Case of Hereditary Ataxia [Cas d'hérédo-ataxie]. (Journ. Neur. et Psychiat., Num. Neur. 7, 1923.) Vandervloet and Klynens.

The authors describe a case which they classify under the spastic hereditary ataxias described by Strumfell. The condition made its appearance in a boy, æt. 10. The first features were a heaviness and easy fatigability, especially of the lower limbs. Ataxia of the upper limbs followed, and there was a loss of the astereognostic sense. Sensation for firm touch and temperature were not impaired. A feebly positive Wassermann was obtained. The family history was negative for this condition, and no history of syphilis was forthcoming.

The disease progressed for about three years, at the end of which time the boy was practically disabled for any physical work. No

mental disorders were recorded save a period of excitement on being separated from his father, and the condition has tended to get rather better in recent years.

D. EWEN CAMERON.

Lesions of the Base of the Brain [Lésions de la base]. (Journ. Neur. et Psychiat., Num. Neur. 7, 1923.) Van der Vloet, A.

The case presented is that of a young man, æt. 20, with a tubercular family history. A few months ago he suddenly found that his face was drawn over to one side, and some days later an opacity of the left cornea was noted.

On examination diminution of sensation on the left side of the face and loss of hearing on the same side were elicited. From time to time he had attacks of vomiting and of vertigo. There was practically no response to the caloric test when applied to the left vestibule; inco-ordination set in, his gait grew uncertain and tended to the right.

The cerebro-spinal fluid was normal and the Wassermann reaction was negative. After discussing the various possibilities the diagnosis of tubercular meningitis was advanced.

D. EWEN CAMERON.

The Cortico-thalamic Paths [Les voies cortico-thalamiques]. (Journ. Neur. et Psychiat., Num. Neur. 4, 1924.) D'Hollander.

Dr. D'Hollander, in an article illustrated by very clear diagrams, discusses the anatomy of this part of the nervous system.

J. S. IAN SKOTTOWE.

A Case of Choreo-athetosis [Un cas de choreo-athetose]. (Journ. Neur. et Psychiat., Num. Neur. 2, 1923.) Enderle.

Dr. Enderle quotes a case of this malady in a young man, æt. 17. His illness began some five years previously with difficulty in walking, followed by inco-ordinate involuntary movement in the left leg. The left arm soon became involved; the head was turned to the right. The patient continued in this state for five years, when speech difficulties began.

The patient knew what he wanted to say and found his words, but the articulation could not be understood; the tendon and cutaneous reflexes were normal. The pupillary reflex was present, but the right pupil was larger than the left. There was no Romberg sign; no Babinski, no clonus, no sensory defect, no paralysis. There was a permanent state of spasticity. The patient was treated with antipyrin, valerian and veronal, and at the end of ten days there was marked improvement. This soon passed off, and laryngeal spasms and dysphagia became manifest. The spasm came to involve the limbs of the right side. Improvement set in: the patient was able to walk and swallow without difficulty; he became calm and happy. The diagnosis and probable pathology are discussed.

J. S. IAN Skottowe.

A Case of Status Epilepticus [A propos d'un cas de status épilepticus]. (Journ. Neur. et Psychiat., Num. Psychiat. 3, 1924.)
Borremans.

The case described is that of a man, æt. 23. His family history and his history of previous health are negative. His illness started suddenly when he was 15, and he showed grand and petit mal episodes until the time of his death in a status epilepticus eight years later. His convulsions occurred at frequent intervals and were very severe; the epileptic character was well marked. From time to time he complained of very severe pains passing from the lower limbs to his thorax.

Post-mortem showing thinning of the cranial bones and moderate injection of the vessels of the dura. A spine of bone projecting in the neighbourhood of the post-central convolution; a further collection of bony spinules was found further forward. The membranes were adherent, and there was a complete absence of cerebro-spinal fluid on the convexity. Microscopically there was some sclerosis of the cornu Ammonis and extravasations of blood in the pia mater and the cortex. The Betz cells in the paracentral lobule were distended.

Discussing the nature of the bony masses, the author states they are in relation to the Pacchionian bodies. He holds the view that these bodies are of the nature of a safety valve to relieve hypertension of the cerebro-spinal fluid, and that the bony growths are calcareous deposits formed in the dura consequent to variations in tension in the cerebro-spinal fluid, the exact position being determined by local traumata or infection.

In summing up the case Dr. Borremans leaves the open question as to whether the bony spines are causative or incidental, but holds that they at least have determined the pains which the man complained of. He suggests that it might be advisable, by means of intravenous injections of saline, to increase the cerebro-spinal fluid, and thus interpose a layer of liquid between the cortex and the irritant.

D. Ewen Cameron.

Tremor and Hepatic Disorders [Tremblement et troubles hépatiques]. (Fourn. Neur. et Psychiat., Num. Neur. 1, 1923.) Alexander, M.

In many well-established syndromes one notes the co-existence of disorders of movement and of disturbed visceral functioning. Occasionally one observes cases which, while approaching one or other group of disease, do not coincide entirely with any. Such a case is presented here.

The patient is a man, æt. 58. His previous history is negative and his life has been abstemious. His complaint is of vague pains, first in the lumbar region, later over the spleen.

Examination reveals an intention tremor, which is generalized. The pupils are equal and the tendon reflexes are normal; there is no nystagmus. There is disturbance of the portal circulation, with engorgement of the superficial abdominal veins and the formation of a caput medusæ. The liver and spleen are enlarged. Examination

of the blood shows a leucocytosis of 22,400, polymorphs 78%. The sugar tolerance is normal. No diagnosis is arrived at. In the subsequent discussion the question of Wilson's disease is raised, but is discarded.

D. EWEN CAMERON.

Polyneuritis following Serum-therapy [Les Polynévrites sérothérapiques]. (Journ. Neur. et Psychiat., Num. Neur. 8, 1923.) Marchal, M.

The author records without details a (second) case of polyneuritis following injection of serum, and quotes other cases. He states that this must now be included among the causes of neuritis. In the discussion it was agreed that it is important (though difficult) to distinguish the effects of the serum from the effects of the infection.

W. D. CHAMBERS.

Two Cases of Compression of the Spinal Cord [Deux cas de compression medullaire]. (Journ. Neur. et Psychiat., Num. Neur. 8, 1923.) Van Gehuchten, P.

The first case showed diminution of power and of sensation in the legs, increased deep reflexes and a double Babinski, without any spinal pain, during some weeks, after which complete flaccid paralysis with incontinence supervened. The vertebral column was normal by X-ray and the cerebro-spinal fluid was clear and of normal tension; Wassermann reaction—, albumen ++, lymphocytes IIO. The author diagnoses tuberculous pachymeningitis with compression.

In the second case, after a few days' weakness complete flaccid paraplegia developed suddenly. X-ray showed nothing abnormal. Cerebro-spinal fluid yellowish, with increase of albumen and cells. Two months later there was flaccid paralysis of the muscles of the pelvis, thighs and legs, but some voluntary movement in the feet; no loss of sensation; sphincters normal; some girdle-pains at the level of the lower dorsal nerves. Von Pirquet's test was markedly positive. The author diagnoses compression of the lumbar enlargement specially affecting the anterior roots by tuberculous pachymeningitis, and excludes double acute poliomyelitis.

At a later meeting the author reported further on the first case. Radiography after intra-thecal injection of lipiodol showed partial obstruction at the sixth dorsal and a laminectomy was performed. The ligamentum flavum between the fifth and sixth dorsal was much thickened, but the dura and the cord seemed normal. A sound could be freely passed up and down in the canal. After this operation the nervous symptoms were slightly better, but the patient was seriously ill with a large bedsore, and not expected to survive.

W. D. Chambers.

Two Cases of Tumour of the Epiphyseal Region of the Brain [Deux cas de tumeur de la région épiphysaire]. (Fourn. Neur. et Psychiat., Num. Neur. 8, 1923.) Martin, P.

Two cases of brain tumour seen in Cushing's clinique. In one case the symptoms indicated the right cerebello-pontine angle as

the site, but at the autopsy a new growth arising from the left optic thalamus and replacing the corpora quadrigemina and pineal body was found. One of the symptoms was a slight diminution of sensation on the right side. In the second case (æt. 13) there had been polyuria and polydipsia for a year, and a pituitary tumour was diagnosed. At the autopsy the hypophysis was found to be normal, and the tumour arose from the corpora quadrigemina, invading the cerebellum, corpus callosum and roof of the third ventricle. In neither case were there any pupillary signs.

W. D. CHAMBERS.

## 2. Psychology and Psycho-Pathology.

The Significance of the Idea of Death in the Neurotic Mind. (Brit. Journ. Med. Psych., August, 1924.) Connell, E. H.

The idea of death appears to be very seldom found in the minds of the physically ill; in neurotics who are physically ill, the preoccupation in resisting organic disease diverts attention from the idea of death; in melancholia the death idea is associated with self-hatred or loathing. According to Freud, in melancholia hatred is projected from the abandoned love-object on to the self. Connell thinks that this is wrong, for the fact of recovery seems to weigh against the projection of hatred on to the self. In addition, the projection does not give any psychic ease, which it ought to do.

The predominant effect in melancholia is acute unpleasure, or more familarly depression. The affect, unable to find real expression, breaks into the self-regarding sentiment, and the melancholic accuses himself of sin beyond redemption, and so there is an impulse to death. According to the intensity of the affective excitement, there is present the idea of death, a tendency to death, or an impulse to death.

In anxiety hysterias there is a tendency to death, and if agitation be extreme, an attempt at suicide will almost surely be made. Generally the more talk there is of death, the less likely will an attempt be made. In conversion-hysteria death is often spoken of, but not even a half-hearted attempt is made. Cases of phobia and obsession do not talk of death convincingly. The anxiety hysteric is the most dangerously suicidal. In obsessions the idea of death does not become a tendency, because the obsession is a compromise by displacement or a solution of the conflict. In agitated anxious-hysteria the tendency to death can become an impulse if regression occurs, i.e., the depressed phase of manic-depressive insanity develops.

The idea of death to these patients is quite different to what it is to the normal individual; to the neurotic it is equivalent to quiescence; it is a sleep and a forgetting, an escape from the pressure of life. It is an activity of the pleasure principle, whereas to the normal individual it is very much an activity of the reality principle.

Depression and the death idea are associated most markedly

with vagotonic symptoms. Vagotonia is observed to occur in some individuals at certain epochs in their life-history, namely, at puberty and at the climacteric. It is at these times that dementia præcox and melancholia occur, both associated with impulses to death. Physiologically the idea of death is due to alteration in the endocrines, psychologically to tension from withheld affect.

In all neurotics there is a constitutional factor, which Janet calls lack of psychological synthesis. The lack of proper integration may be due to temperamental influences, especially in relation to the ductless glands. Following on this, the pleasure principle can less readily adapt itself to the reality principle and this leads to conflict, and with conflict the continual arousing of fear in its most primitive form. As a result of unresolved conflicts, fatigue is engendered, and this will still further interfere with cortical function and so intensify the symptoms. The normal engram which subserves the fear reaction involves both the central nervous system and the sympathetic system. The function of the latter is to prepare the body for instant action or flight, which will immediately ensue. When this action is impeded by the activity of another engram, say that subserving curiosity, there appears to be a failure of discrimination and control, and higher cortical centres being in abeyance, there is a short-circuiting at the level of the basal ganglia, so that uncontrolled activity in the shape of tremor occurs. In this condition we find both agonist and antagonist muscles held in increased postural tone ready for action, but in the absence of cortical discriminative function neither relaxes to allow the other to act, hence the rigidity. In the ordinary neurotic the fear reaction is not subserviously a well-organized engram ready for prompt response, hence the cortical control is never at its best, and the establishment of the short-circuiting, thalamic-striate, fear tremor is easy and frequent. The nature of the tremor depends on the levels unmasked. When cortical control only is removed there will be a fine tremor simulating the toxic tremors; when striate control is removed there will be coarse tremors, as in the pseudo-Parkinsonian syndrome not uncommon to hysterics. When still lower controls are removed there will be inco-ordinations such as occur in interferences with the fore-spinal arc.

The author explains the inhibition of cortical control and the development of a thalamic striate short-circuit as due to irregularity in the suprarenal secretion. In the constitutional neurotic the failure of psychological synthesis depends on an excess of suprarenal secretion in the temperamental balance.

G. W. T. H. FLEMING.

On the Physiology of Tremor in Relation to the Neuroses. (Brit. Journ. Med. Psych., November, 1924.) Gordon, R. G.

The tremors of the neuroses are expressions of, and are derived from, affective conditions of fear and anxiety. The localization of the principal integration of the primitive response to noxious stimuli is in the thalamus. In addition to the useful purposive

reactions which accompany fear, certain useless reactions occur, the most characteristic of which is tremor, which is a sub-cortical reaction. The primary reaction of fear is dependent on an engram integrated at the thalamic level, and exhibits the characteristic all-or-none reaction of that level. Under ordinary arcs in man and higher animals, this primary reaction is under cortical control.

Crouzon divides tremors into physiological, organic, toxic and hysterical. The inco-ordinations depend on interference with the afferent side of the cerebello-nucleus tubes or pre-spinal arc, the intermediate coarse tremors on interferences with the next arc, i.e., the control of the striato system over the lower centres in the midbrain, and the fine tremors on interferences with cortical control over the basal ganglia. In all cases of fine tremor there is a marked loss of control of affective reactions. The author points out that in the neurotic there is a want of adaptation both in respect of the environment and the particular aspects of the personality. The highest cortical functions of control, integration, discrimination and reference in time and space are deficient in the neurotic.

G. W. T. H. FLEMING.

Primitive Mentality and the Unconscious. (Brit. Journ. Med. Psych., April, 1924.) Baynes, H. G.

Baynes points out that the primitive psyche resembles our unconscious processes in its prelogical or irrational character. The myth as the psychological currency of the prelogical psyche can be fully understood only by an intuitional or prelogical attitude. Mythological formations are an invaluable guide in the shaping of an instinctual attitude to experience. This corresponds to the view of the Zurich School and their concept of the racial unconscious. Levy-Bruhl, in his Primitive Mentality, points out that the primitive mind is largely controlled by what Bruhl calls "collective representations," and which are ancestral survivals. Behind the primitive customs, beliefs, magical rites and fears loom perpetually the spirits of the dead. To the pre-logical mind a mythological interpretation is immediately convincing, a rational inference quite beside the mark. The perception of the occurrence and the mythological interpretation are synchronous. The primitive is not yet distinct psychologically from his race, his ancestors or the world in which he lives. There is a condition of identity with his tribal group and his environment which could enable him to draw objective conclusions; all his conclusions are representations rooted in ancestral or tribal experiences. Primitive mind is dominated by fear, and associations of fear cling to everything that is unfamiliar or unknown. An essential function of the unconscious mythological activity is the shaping and transforming of the instinctual attitude to life—the adaptation to reality. summing up, Baynes points out that the whole of his paper turns round the concept "attitude," not only towards external objects, but also internal objects, i.e., the relation to one's own thoughts

and feelings and to one's personality in whole or in part. Hence there is a psychological environment just as there is an objective environment. In so far as the instinctual attitude is unconscious, it is determined by ancestral representations as in primitive mentality. In so far as we are able to appreciate and consciously realize these orchitypal determinants, the instinctual attitude becomes subject to the control and direction of the will.

G. W. T. H. FLEMING.

Professor Freud's Group Psychology and his Theory of Suggestion.
(Brit. Journ. Med. Psych., May, 1925.) McDougall, W.

McDougall, after considering sundry illustrations from Freud's book, Group Psychology and the Analysis of the Ego, states Freud's theory of group psychology as follows: The main factor in group life is suggestion. The fundamental problem of group psychology, therefore, is the nature of suggestion. Suggestion is always of the same nature as the suggestion of hypnosis; and the study of hypnosis shows that suggestion depends upon a peculiar emotional attitude of the patient to the hypnotist. This attitude results from the re-animation (by regression) of an atavistic survival, an attitude acquired by the race during the long period in which men lived in the primal horde, a horde dominated by a brutal horde-leader, fiercely jealous of his sexual rights over all the women. This horde-leader forced all his fellow males to repress their sexual urgings; their repressed libido then became fixated on him, so that they loved him, and falsely believed that he loved them, at the same time that they feared him for his brutal domination and plotted to slay him. When any man lives as a member of a group and is subject to group influences, when he accepts the traditional morality and develops the virtues of the good and patriotic citizen, it is because some leader throws him back from his hard-won individuality, forces upon him an atavistic regression to the complex attitude proper toward the leader of the primitive horde, so that he becomes suggestible towards him. The part of the leader may be played by an abstract idea, or even by a wish or aspiration held in common by a number of individuals. McDougall then proceeds to show that this theory does not explain the primary fact of contagion of emotion, the leaderless group, or how a leader attains leadership, forces regression on his followers and so constitutes himself a leader.

It reduces all the social life of men, including team-work, all patriotism, all moral self-control and discipline, all self-sacrifice for the good of the community, to the working of an atavistic regression, to a return to the behaviour proper to the remote age in which the violence of a bully, armed with a club and prompted by sexual jealousy, was the only controlling force in human society. It makes sexual jealousy and envy the roots of all the nobler manifestations of human life. McDougall finds the theory "not proven and wildly improbable."

G. W. T. H. Fleming.

Progress in Individual Psychology. (Brit. Journ. Med. Psych., April, 1924.) Adler, A.

The author's point of view is essentially teleological. Neuroses and psychoses are modes of expression of people who have lost courage. These people are all trying to proceed from a sense of inferiority to a position of elevation. The stronger the feeling of inferiority, the higher is the aim of personal power. In the child's first few years it receives the impress which moulds its attitude towards life, hence the importance of a bad upbringing, unfavourable conditions or congenital physical infirmities. Adler's treatment for neurotics consists in revealing their mistakes, demolishing their striving after power and raising their social feeling.

G. W. T. H. FLEMING.

The Psychopathology of Lying. (Journ. of Neur. and Psychopath., May, 1925.) Altshuler, I. M.

Drawing largely on analogies from animal life, the savage and the child, the author attempts to show that lying in man was primarily an urgent necessity for the purpose of survival, which, in the course of time, became his second nature. He learned to control this "urge" as he learned to control many others, but the "urge" for lying remained intimately connected with the ego "urge." Lying brings a great amount of pleasurable sensations. When the "urge" of lying exceeds its permissible degrees, we call it pathological lying.

Admitting the difficulty of differentiating a "normal" from a pathological lie, he believes that the principle of both kinds of lies is the same, because both kinds serve the same purpose, namely, the selfish motive. The difference is purely in degree, in art, in fabrication and in application to reality. Pathological lying is a result of mental retrogression, which is clearly seen in individuals freed from obligations of their social impulses, thus returning to their primitive state of mind. The "urge" to live is not lost in pathological individuals. They merely lack judgment as to how to conduct their ego properly without defying normal standards. The pathological liar, as the child, is not aware of his own lying. Both are led by subconscious force, the first by an impulse which has become morbid, the second by the same impulse, which has not yet been harnessed. Therefore the feeling of discomfort that their lie may be discovered is absent in both of them.

WM. McWilliam.

The Œdipus Complex: An Attempt to Estimate its Rôle and Importance. (Arch. of Neur. and Psychiat., February, 1926.)
McDougall, Wm.

Freudian psychology has presented a new view-point, which has produced a deep and wide chasm among students of human nature, and no more debatable feature of the theory is there than that provided by the edipus complex. Prof. McDougall in this paper

discusses the ædipus complex, seeking to show that although there is a certain amount of truth in the theory of the ædipus complex, the range of its influence has been grossly exaggerated, hoping thereby to diminish the width of the chasm. He believes that there is much in Freud's psychology that is true and of fundamental importance, and it is of interest that he accepts the following:

(I) Human nature and behaviour are always and everywhere

purposive, conative, hormic.

(2) The mind is built up on a foundation of innate dispositions or instincts which, throughout our lives, prompt us all alike to seek certain natural goals—inborn tendencies which shape our ends, rough-hew them as we may.

(3) It is right in regarding these instinctive dispositions as springs

of energy.

(4) It is right in regarding many disorders of mind and body as arising from maladjustment of these hormic impulses, from conflict between them and from repression, resulting in the formation of morbid complexes, and from the continued subconscious workings of impulses thus repressed.

(5) It is right in maintaining that these disorders can be prevented only by a better understanding of our instinctive nature and the modes of its operation, and can be cured only (in many cases) by exploring and revealing to the patient the psychogenetic processes

that have resulted in conflict and maladjustment.

Prof. McDougall proceeds to review the early writings of Prof. Freud on the subject of the ædipus complex, and the various forms in which it is accepted by Freudians, and finally the various changes of view which have been observed in Freud's recent articles. The Passing of the Œdipus Complex Freud would seem to believe that though the complex is a central phenomenon in childhood, the majority of human children pass through it, and it becomes extinguished, being absent in normal adults. He states that he still believes in its existence in the child, and yet can conclude "that our whole insight into these processes of development in the girl is unsatisfying, shadowy, incomplete." Prof. McDougall submits that the discussion of the ædipus complex by Freud amounts to virtual admission by him that the assumption of the presence of the ædipus complex in all children was mistaken, and urges him to admit that the infantile ædipus complex is a peculiarity of some of those infants who later become neurotic. By doing so the Freudian school will go far toward making possible that reconciliation between psycho-analytic theory and academic psychology, and fulfil the purpose of Prof. McDougall's paper.

WM. McWilliam.

The Definition and Diagnosis of Moral Imbecility: A Symposium arranged by the Education and Medical Sections of the British Psychological Society. (Brit. Journ. of Med. Psychol., March, 1926.) I: Tredgold, A. F.

The author opens the symposium with the legal definition of moral imbeciles: "Persons who from an early age display some permanent mental defect coupled with strong vicious or criminal propensities on which punishment has had little or no deterrent effect." He then proceeds to trace the life-history of the individual from the view-point of his behaviour. As the child comes under the influence of his surroundings through his special senses he evidences an instinctive type of behaviour, but a type which he gradually perceives to be unfavourable to him and incompatible with the life of the family, which influences him through prohibition and precept, approval and punishment. Thus a degree of control is set up, which Dr. Tredgold believes to be mainly intellectual, without any real moral feeling. But in time, under the influence of the family and the larger herd, a feeling of "rightness" and "wrongness" begins to attach itself to his conduct, with the result that all his behaviour comes to be complicated by emotions which together go to make up the moral sense, which Dr. Tredgold looks at in the light of a sentiment. He believes that this moral sentiment is the germ out of which are developed all these higher emotions of justice, patriotism, duty and altruism generally which distinguish the man of culture from the primitive savage. perception is purely intellectual, and moral sense or sentiment is essentially emotional or conative, exerting a greater power of inhibition over primitive instincts than does mere moral perception. It is an active, compelling force towards correct conduct, not merely inhibitory.

Whether the life-history of the mature individual will be characterized by correct conduct or misconduct will depend on the degree to which the controlling functions of mind, moral perception and moral sense, are developed, and the strength of the innate tendencies which have to be controlled. In some individuals the egotistic tendencies are very strong, and wisdom and moral sense avail them little. But even with fairly strong anti-social propensities an individual may still keep within the bounds of the law in the absence of moral sense, provided he has wisdom. Dr. Tredgold believes that there are a very large number of people in whom moral sense is very poorly developed, but they have sufficient common sense or wisdom to appreciate the personal disadvantage of wrong-doing, and this acts as an efficient check so long as there is any likelihood of detection.

It may happen, however, that in an individual possessed of strong anti-social propensities moral sense and wisdom are both defective. In such a case he is devoid of all power of inhibition and is necessarily entirely at the mercy of his propensities, and is an incorrigible criminal. In the opinion of Dr. Tredgold this is the condition present in moral imbecility. The moral imbecile is not lacking in the capacity for acquiring school knowledge, as are all ordinary imbeciles and a large number of the feeble-minded. On the contrary, he is often possessed of a cleverness, even a brilliance, which distinguishes him very widely from most ordinary defectives. He is also usually a good conversationalist, is ready at repartee and nimble-witted; he has an engaging manner, and is an exceedingly plausible and ready liar. But he is absolutely

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devoid of all moral and altruistic feeling. He knows neither shame nor gratitude, and will requite the utmost kindness and consideration with heartless robbery, in doing which he will not even refrain from violence. At the same time he is so devoid of the capacity for mental comparison and discrimination for forming judgments and for looking ahead—in short, of those attributes of mind which collectively constitute wisdom or common sense—that he is quite unable to appreciate the personal disadvantages of In short, he regards the psychological basis of his conduct. moral imbecility as consisting of an innate defect of wisdom and moral sense associated with the presence of strong anti-social tendencies. Such a person conforms to the statutory definition both of imbeciles and of feeble-minded persons, and in theory he is capable of being certified under these definitions. With regard to the definition of moral imbecility itself. Dr. Tredgold believes that it does, on the whole, define the class which it is intended to define with a very considerable degree of accuracy.

With regard to diagnosis, when it is considered that the defect is manifest from the early years of life, and when accompanied by pronounced vicious and criminal propensities, it shows itself in a marked selfishness, in intractability, an utter disregard of the rights and feelings of other people, a complete lack of affection and shame, an intolerance of all discipline and authority, and persistent and incorrigible wrong-doing: that the defect is shown by the fact that such cases occur in spite of the most careful upbringing, in spite of precept, example, punishment and every kind of reforming influence, and in spite of the fact that their misdeeds repeatedly recoil upon their own heads, and if the possibility of misconduct due to disorder or delayed development of mind be excluded, there should seldom be any real difficulty.

The author does not think that any help in diagnosis will be afforded by either serial intelligence tests or tests of ethical perception. He considers the real test to be the persistent, senseless and shameless behaviour of the individual, despite every reforming influence which can be brought to bear upon him.

II: Burt, Cyril.

The author of this contribution summarizes his objections to the clause defining the moral imbecile. He believes that the term "moral imbecile" is a psychological misnomer, and that both noun and adjective are entirely inappropriate, in that the persons contemplated are not imbeciles in any intelligible sense of the word, belonging, if anywhere, not to the lower grade of defectives designated by that term, but rather to the higher grade now designated "feeble-minded." Further, morality is no longer to be regarded as an innate faculty, subject to congenital defects, but as a quality acquired through training and experience. The innate defect which is most commonly responsible for the immoral actions of so-called moral imbeciles is defective intelligence, and the other innate conditions affecting moral conduct are in their essential nature temperamental rather than moral. Thus, in addition to intellectual deficiency, there is a second form of innate defect,

which is general enough to be recognized as a species of mental deficiency, and which he terms "temperamental deficiency." The author, therefore, proposes that the conception of temperamental deficiency be substituted for that of moral imbecility, and thinks that the distinction calls for no explicit mention, either in the statute or in the certificate.

Since the mind includes temperament, as well as intelligence, mental deficiency must include temperamental deficiency as well as deficiency of intelligence. Hence he contends that cases of temperamental deficiency can also be certified under the clause defining the feeble-minded.

With regard to the differential diagnosis of temperamental deficiency, he states that it turns chiefly on the following four points:

(1) The condition is an emotional one rather than an intellectual one. (2) The condition must be innate, and therefore permanent, not curable or acquired. (3) The condition must be general rather than specific, e.g., more than one instinct or emotion must be excessively developed. (4) The excessive emotionality must be so extreme that the person needs care, supervision or control for his own protection or for that of others.

The author concludes by stating that whatever interpretation they give to the statutory definition, all modern authorities seem to be agreed that cases genuinely falling under it are exceptional, and believes that with but slight modifications in the administrative procedure, the few cases that at present can be certified with some advantage as moral imbeciles could be dealt with equally well in other ways, and the total abolition of the clause would, therefore, seem to be in every way desirable.

III: Smith, M. Hamblin.

Dr. Hamblin Smith does not recognize the existence of the condition moral imbecility, and believes that the retention of its definition is superfluous and misleading, as all the "alleged cases" of the condition which had come under his notice could either be brought under the definition of feeble-mindedness, or else have been cases of definite psychosis or of mental conflict and repression.

IV: Thomas, W. Rees.

This author is at a loss to discover any means of localizing "the moral sense." He states that the cases that, on evidence of past conduct, should, perhaps, be regarded as moral imbeciles, actually give, on examination, no ground for the assumption, as they can pass all the ethical tests to which we can submit them. It is only on the conduct side they fail. The whole position is one of emotional attitude.

The only certain permanent mental defect the author is able to determine is "the presence of a psychosis or a psycho-neurosis, and in so far as these conditions are incurable or have failed to yield to treatment they can be regarded as constituting the permanent mental defect."

V: Shrubsall, F. C.

In this contribution the view is taken that there are cases that can rightly be certified under the definition of moral imbecility, though only in a few instances would they comply with all its legal postulates. The cases the author has in mind show no defect of intelligence as measured by formal intelligence tests or by scholastic examinations; can render lip service to any ethical tests, and have largely escaped the effects of the early example and precepts, forcible or otherwise, of the parents or surrogates. When they have shown the necessary strong propensities and have been ineffectively punished, such are clearly comprised within the definition. It appears to the author that the essence of the defect seems to be the lack of feeling tone which keeps their social reactions, or many of them, at an infantile level, checks the action of the herd instinct, prevents their appreciating or caring about the fact that they are being or have been punished, and leaves them in the extreme of selfishness. WM. McWilliam.

The Discrimination of Dementia Præcox from Schizophrenia; A New Method of Investigation—Ether Anæsthesia [La Discrimination entre la Démence Précoce et la Schizophrénie; Un nouveau moyen d'investigation—L'Ethérisation]. (L'Encéph., May, 1925.) Claude, H., and Robin, G.

The authors do not consider that schizophrenia and dementia præcox are synonymous, the simple forms of the latter, the hebephreno-catatonic and some of the paranoid types, being entirely distinct from the former. In cases where the patient can answer questions and absence of dementia can be thus demonstrated the distinction is easy, but in advanced cases both conditions show negativism, apathy, stereotypies, etc., and they are not easy to distinguish. The authors state that the signs in dementia præcox appear to rest on a neurological basis, but in schizophrenia on a psychical formation. A certain number of negativistic adolescent patients were anæsthetized by closed ether and their rambling statements during recovery carefully noted. In one reported case a valuable clue to an early psychic trauma was discovered and the case is now regarded as schizophrenic. The authors conclude as a result of their investigations that in dementia præcox the poverty of ideation and affection barrenness are demonstrated by etherization, but that in schizophrenia there exists only lack of balance of the mental functions, a dislocation between practical activity which is absent or disordered, and intellectual activity, which is intact. W. D. CHAMBERS.

Morbid Mental Subduction and Secondary Psychopathic Reactions [Subduction mentale morbide et Réactions psycopathiques secondaires]. (L'Encéph., May, 1925.) Mignard, M.

This name is given to the pathological state which results when certain neurological automatisms, normally subordinate to mental activity, become disordered and exercise an excessive influence on the psyche. A case is quoted which suggests classical schizophrenia, but the various features are closely analysed and the arguments of Minkowski, as well as the opposing theories of Giraud, examined. The author lays great stress on the picture of dementia presented by his patient (who later had a perfect remission), and points out that "dementia" or pseudo-dementia may be a secondary defence-reaction—a reaction of inertia, of "laissez aller," caused by the difficulties of the contest. Whether the case is dementia or pseudo-dementia can only be judged by its duration. He considers that in the case described the psycho-physiological disorders were of psychogenic origin, and that the inertia and schizoidism were voluntary or even instinctive reactions, the case being complicated by the insubordination of neurological automatisms which he calls mental subduction.

W. D. CHAMBERS.

#### 3. Clinical Psychiatry.

An Attack of Melancholic Depression with Anxiety and a Suicidal Attempt, in the Case of a Precocious Dement, or in the Course of an Atypical Manic-depressive Psychosis [Accès de dépression mélancolique avec anxiété et tentative de suicide chez une démente précoce ou au cours d'une psychose maniaque dépressive atypique]. (Bull. Soc. Clin. de Méd. Ment., May, 1923.) Naudascher, G.

Apparently a well-marked hebephrenic of three years' standing, this woman, five months after returning to the care of her family, developed a state of acute anxiety and depression, with self-reproach and refusal of food. The blood-pressure was 12. After thirty-seven days' treatment with adrenalin (mxxx daily) the blood-pressure rose and the simple hepephrenic state reappeared.

W. D. CHAMBERS.

Crises of Anxiety, Tremor, Pseudo-asthma and Vago-Sympathetic Disorders as Early Manifestations of Epidemic Encephalitis [Crises d'anxiété, de tremblement, de pseudo-asthme et troubles vago-sympathiques, manifestations initiales de l'encéphalite épidémique]. (Bull. Soc. Clin. de Méd. Ment., April, 1923.) Petit, G.

The author finds fault with the common conceptions of epidemic encephalitis and considers it a disease of slow evolution, of which the duration should be counted in months or years. What are commonly called its sequelæ are essential stages of the actual disease, and it only rarely begins by a febrile attack.

He describes in detail a case in which the symptoms noted in the title occurred throughout showing interesting fluctuations. Two charts are shown correlating the organic and psychic manifestations and their oscillations, which were very marked, and, towards the end, very rapid.

W. D. Chambers.

Syphilis in Mental Disorders [La Syphilis dans les affections mentales]. (Bull. Soc. Clin. de Méd. Ment., April, 1923.) Hoven, H.

A report of the results of a Wassermann test made on 150 female patients in an asylum. Of this number 23 gave a positive reaction (15%), including 11 out of 12 cases of general paralysis.

A. Marie reported a positive reaction in 113 (38.3%) of 295 male

asylum patients, including 57 out of 61 general paralytics.

The author concludes that syphilis should be regarded as an important pathogenic factor in mental disease apart from general paralysis.

W. D. Chambers.

Epileptiforme General Paralysis of Prolonged Duration [Paralysis générale épileptiforme prolongée]. (Bull. Soc. Clin. de Méd. Ment., April, 1923.) Capgras, J., and Reboul-Lachaux, J.

A detailed description of a patient whose illness began eight years ago with epileptiform fits and who is now demented. General paralysis was first diagnosed four years ago—and after consideration the author decides that the disease is general paralysis, though neither the physical signs nor the mental symptoms are typical. Convulsive seizures have been frequent throughout, and the other possibility was epilepsy occurring in a syphilitic patient. The results of Wassermann and other tests at various stages are given and show curious variations.

W. D. Chambers.

A Case of Lilliputian Zoopsia. The Rôle of Constitutional Mythomania in Certain Hallucinations of Sight [Un cas de zoopsie Lilliputienne. Rôle de la mythomanie constitutionnelle dans certaines hallucinations de la vue]. (L'Enceph., May, 1925.) Bouyer.

The case of a constitutionally psychopathic woman, æt. 32, who was admitted suffering from a toxic delirium with the customary terrifying hallucinations of sight. Within a day or two the content of the hallucinations changed and she saw small parti-coloured "phantoms," which she described at times as "like dolls" and "butterflies." Most of them were agreeable to watch, but some had "terrible heads." The psychic mechanisms at work are discussed, and the development of mythomania and of schizophrenia are compared.

W. D. Chambers.

A Case of Insanity à Deux [Un cas de délire à deux]. (Journ. Neur. et Psychiat., Num. Psych. 6, 1923.) Alexander, M.

The case of two sisters, æt. 55 and 71, are described. Each has a system of delusions of persecutions of her own, but in addition each accepts as well-founded and true the delusions of her sister. It is therefore not a perfect case of communicated insanity.

W. D. CHAMBERS.

A Difficult Diagnosis in the Asylum of Tournai [Un diagnostic difficile a l'asile de Tournai]. (Fourn. Neur. et Psychiat., Num. Psych. 6, 1923.) Guilmot, A.

The case of a man, æt. 56, suffering from marked choreiform movements, occasional violent outbursts followed by amnesia, and progressive dementia for some years. Wassermann reaction + in blood, but no physical signs of general paralysis. The diagnosis appears to rest between Huntingdon's chorea, atypical general paralysis, and disseminated sclerosis with psychic symptoms.

W. D. CHAMBERS.

Imaginative Insanity; Escape from Reality to Create a New and Imaginary Personality; Consideration of the Patient's Sincerity [Délire d'imagination; Evasion de la réalité pour créer une nouvelle personnalité chimérique; Discussion de la sincérité]. (Bull. Soc. Clin. de Méd. Ment., March, 1923.) Leroy and Montassut.

The case of a cultured, well-educated and travelled woman whose family circumstances were much reduced in her twentieth year. She succeeded in adapting herself, but after being jilted at the age of 27, morbid symptoms began. She entered the asylum in 1921, æt. 40. She now exhibits a constant confabulation, fantastically grandiose, bearing on her own past exploits—literary, social, amatory, etc. The aggrandisement extends even to her ancestry. Apart from the imaginative account of her own career, her judgment is unimpaired, and the author considers that this indicates a more or less conscious intention to deceive. There are no psycho-sensory disorders, no disorientation or incoherence, the memory is good, and enfeeblement is not easy to detect. There is no system of delusions.

W. D. Chambers.

Two Cases of Hebephrenia which began with Pyrexia [Deux cas d'hébéphrénie ayant débuté par une pyrexie]. (Bull. Soc. Clin. de Méd. Ment., March, 1923.) Bernadou, M. H.

Two cases (æt. 24 and 28) of polymorphic psychic disorders suggesting dementia præcox following a pyrexial period. Both were previously healthy. The bodily illness may have been epidemic encephalitis, typhoid fever or some unknown neuropathic virus. The second case exhibits marked tics of the face, head and trunk.

In a discussion which followed the paper, one speaker considered the appearance of the first case to be conclusive evidence of epidemic encephalitis.

W. D. Chambers.

The Parallel between the Mental Disorders in the Adult and the Child [Parallel entre les troubles mentaux de l'adulte et de l'enfant]. (Journ. Neur. et Psychiat., Num. Psych. 2, 1923.) Decroly.

Dr. Decroly, in his address, discusses the confusion of nomenclature which has arisen in the classification of mental disorders. He points out that, however, it will be found that most terms can be brought under one of the headings whereby he proposes to group the disorders of adults: (1) Constitutional disorders; (2) Toxic-infective disorders; (3) organic disorders.

Apparently for the author psychic traumata are of little importance, and are included rather vaguely under the last two

headings.

Reasons for a different classification of the disorders in infancy are to be explained by—(I) the fact that in infancy one is dealing with a developing brain; (2) certain mental functions are necessary for the development of other functions.

These facts may be illustrated by the damage a hypothyroidism may do in early life, and secondly the tendency to idiocy in children who are from birth deaf or blind.

D. EWEN CAMERON.

One of the Forms of Abnormal Infancy: Mental Debility [Une des formes de l'enfance anormale: la débilité mentale]. (Journ. Neur. et Psychiat., Num. Psych. 5, 1924.) Simon et Vermeylen.

The authors discuss the difficulty of estimating the degree of feeblemindedness in children. They point out that the same methods which are applied for its estimation in adults are quite frequently erroneously applied to children, without appreciation of the fact that a retardation of two years in a child of seven is of much graver significance than the same retardation after fifteen years.

With regard to prognosis, this rests firstly on the degree of retardation, and secondly the age at which it occurs. As a rule less progress can be expected in a child at puberty than in one at the commencement of the school age. The frequency with which these states are accompanied by a moral defect is pointed out.

D. EWEN CAMERON.

General Paralysis and Blindness [Paralysis générale et cécité]. (Fourn. Neur. et Psych., Num. Neur. 4, 1923.) Alexander, M.

The case presented is that of a man, æt. 41, who at the age of 10 suffered from a meningitis, which left him with a degree of deafness and some feebleness of vision. There was no history of syphilis, either hereditary or acquired. Thirty years later his vision suddenly became worse, and in spite of intensive specific treatment blindness rapidly became complete. A little later he showed painful crises with vomiting. Three years later he suddenly became agitated, his memory for recent events became defective, and he showed the typical clinical and serological findings of a case of general paralysis. An ophthalmoscopic examination showed a double optic atrophy.

The author considers this to be a case which originally showed the signs of a tertiary syphilis and is now progressing to general paralysis.

D. EWEN CAMERON.

The Catatonic Syndrome at the Menopause [La syndrome catatonique à la menopause]. (Journ. Neur. et Psychiat., Num. Psych. 2, 1923.) Vermeylen, Nyssen and Lamsens.

In the second portion of their article the authors quote four cases, in which catatonic features developed at the menopause. The mode of onset is the same in all, namely, a gradual loss of interest in their surroundings and a growing self-interest. mood is one of depression and sometimes anxiety is present. Negativism appears, and with it a mutism and a refusal to take food. Impulsiveness is noted, and in three there were stereotyped movements. At the time of writing it could not be determined which was the ultimate course of this condition, as the patients were still unrelieved, the duration being five years in the longest and one and a half years in the most recent. It is to be noted that this is a rare condition, these four cases being the only four in a group of 1,100-1,200 patients. In their conclusion they quote freely from the literature; it is to be noted that certain authors (Zweig) have considered these cases to be cases of early dementia præcox, who recovered to some extent and have now broken down again. The incidence of the disease is much heavier in women—66% than in men. D. EWEN CAMERON.

Medullary and Cerebral Lesions in the Polyneuritic Psychosis [Lésions medullaires et cérébrales de la psychose polynévritique]. (Bull. Soc. Clin. de Med. Ment., May-June, 1924.) Trenel and Cuel.

Two cases are described in which the psychosis was well marked during life. Chromatolysis and vacuolation of cells is noted. Betz cells are but little affected; in cerebral lesions it is those cells of the deeper layers of the cortex which are most affected. Neurophagocytosis was noted in the cerebral lesions; meningeal affection was not marked.

D. Ewen Cameron.

Cerebral Syphilis, General Paralysis or Manic-depressive Insanity [Syphilis cérébrale, Paralysie générale ou Folie intermittente]. (Bull. Soc. Clin. de Med. Ment., May-June, 1924.) Carrette, M. P.

The author records the case of a man, æt. 45, who contracted syphilis at 18 years. In 1918 he received a slight concussion in a shell-burst and developed ideas of grandeur; was very excited. His pupils were noted to be irregular and his Wassermann was positive. The diagnosis of general paralysis was made; in six months' time he recovered sufficiently without treatment to go out. During the last six years these states of excitement have recurred four times. In certain of them there is a failure to perform simple calculations and a disorientation. Recovery is independent of treatment.

In consideration of the facts that the man, who is now in a well period, shows no mental deterioration, and beyond the neurological findings, no physical stigmata, M. Carrette is inclined to consider him a case of manic-depressive insanity with a superimposed syphilitic meningitis.

D. Ewen Cameron.

State of Excitement in an Epileptic following an Administration of Gardénal [État d'excitation continué chez un épileptique, corrélatif du traitement par le gardénal]. (Bull. Soc. Clin. de Med. Ment., May-June, 1924.) Cuel, Jean.

The case recorded is that of a woman, æt. 51, who has suffered from epileptic fits occurring more and more frequently since the age of 18. Treatment by bromide succeeded in reducing them to six a month. Recently treatment by gardénal was substituted. The fits ceased, but a condition of great excitement supervened and persisted for several weeks. Resumption of bromide speedily terminated this condition, but the fits returned. Each attempt at further treatment by gardénal resulted in an attack of maniacal excitement.

D. Ewen Cameron.

In Reference to Tabes and General Paralysis [A propos de tabes et de paralysie générale]. (Journ. Neur. et Psychiat., Num. Neur. 7, 1923.) Alexander and Enderlé.

The case here described is one of tabes, to which the symptoms of general paralysis were added at a later date. From 1905 the patient had been experiencing lightning pains in the lower limbs; in 1912 in consequence of an obstinate skin lesion appearing in his daughter, his blood was examined and he was found to be infected.

In 1917 his wife died, and following this tabes began to progress, and the symptoms of general paralysis appeared and forced him into confinement. He began to suffer from imperative micturition during the day. At night he would be incontinent. The left ankle became the site of a large painless swelling, which resulted finally in disorganization. Mentally the patient became facile and showed ideas of grandeur. Attention was hard to sustain and his associations were most trivial. His memory and orientation are described as good; there is little speech defect. Treatment of the case was difficult from the fact that the patient had an intolerance for arsenic, and to a lesser extent for bismuth; treatment was finally confined to mercury.

D. Ewen Cameron.

Disintegration of the Personality in the Course of a Case showing Delusion of Control in a Degenerate [Désagrégation de la personnalité au cours d'un délire d'influence]. (Bull. Soc. Clin. de Med. Ment., May-June, 1924.) Montassut and Cenac.

The case described is that of a well-marked dementia præcox of fairly long onset. The sketch of her early life shows a distinctly unstable personality and her family history is bad. The hallucinations, which were a well-marked feature of the condition, are well described. In the subsequent interpretation of the symptoms, the authors hold the view that the hallucinations are the gratification of the patient's desires, though in some cases these are symbolized and endowed with an unpleasant affect.

D. Ewen Cameron.

Ideas of Negation occurring in a Case of Tabes [Idées délirantes de négation au cours du tabes]. (Bull. Soc. Clin. de Med. Ment., May-June, 1924.) Peron, Noel.

The case described is that of a woman who has suffered from syphilis for many years. Recently tabes set in, and since her admission she has grown anxious and depressed, says she has no mouth, no tongue, cannot breathe and so forth. Her ideas are limited to herself, and do not extend to her belongings or to her surroundings. The author considers two possible diagnoses: firstly that the psychosis is dependent on the organic changes in the cord; secondly that it is the expression of an early general paralysis of the insane. The first diagnosis he discards on the ground that the ideas of negation are referred to areas other than those organically affected. While he considers the second diagnosis more likely, he points out that her previous conduct and her present memory are somewhat against it.

D. EWEN CAMERON.

The Diagnosis of General Paralysis in Tabetics in Reference to Two Cases of Tabes with Mental Disorder [Le diagnostic de la Paralysie générale chez les tabétiques à propos de deux cas de tabes avec troubles mentaux]. (Bull. Soc. Clin. de Med. Ment., May-June, 1924.) Peron, N.

With a view to illustrating the dangers of a hasty diagnosis of general paralysis in those cases where a well-established tabes is complicated by the addition of mental features, Dr. Peron records two cases, both of whom were typical tabetics, and in whom at one stage of their course mental features appeared of such a nature as to lead to a diagnosis of tabo-paralysis.

Dr. Peron points out that in the first case there is a marked history of the manic-depressive psychosis, and that in the course of time her mental symptoms disappeared, leaving only the tabes. In the second the mental condition came on suddenly, was of the nature of a confusion and cleared up completely in the course of a few days.

D. EWEN CAMERON.

A Case of Hystero-Epilepsy with Separate Crises [Un cas d'hystéroepilepsie à Crises séparées]. (Bull. Soc. Clin. de Med. Ment., May-June, 1924.) Carrette, P.

M. Carrette presents a case of hystero-epilepsy occurring in a young man with a bad family history. His early character was shown to be epileptic, and following a severe fright he developed a tendency towards convulsions, automatism and amnesiæ. The author endeavours to delimit the features of the one disorder from those of the other by the mental reactions following a paroxysm.

D. EWEN CAMERON.

Psychosis in Malaria [Les psychoses de la Malaria]. (L'Encéph., December, 1925.) Perelmann, A.

Prof. Perelmann divides the psychoses associated with malaria into three groups, viz.: (1) The symptoms appear in a primary

fashion at the height of the infection and are of a toxi-infectious type. The malarial parasites can be found in the blood at this time. (2) Symptoms of a similar nature may arise secondarily while the infection is diminishing and tending to a chronic state. Parasites are no longer found in the peripheral blood, but the characteristic malarial changes in the leucocyte count are found. (3) In this group the malaria can only be looked on as a predisposing factor of some mental malady having none of the characteristics of a toxi-infectious psychosis.

Sometimes the appearance of a malarial psychosis is ushered in by prodromata, such as are common to all infectious psychoses, i.e., general malaise, depression, apathy, headache, sleeplessness. According to Prof. Perelmann, there is no form of psychosis which can be said to pertain exclusively to malaria, but there are certain peculiarities which help to distinguish the malarial psychosis from other toxi-infectious conditions: (1) Relative conservation of perception and apperception, despite some clouding of consciousness. (2) More or less pronounced failure of active attention and of memory. (3) Apart from cases in which there is marked mental confusion, the reasoning powers are not greatly affected. (4) Hallucinations, particularly of hearing, but also of sight and touch, are usually present.

The prognosis of the great majority of cases receiving adequate anti-malarial treatment is good.

J. S. Annandale.

On the Influence of Menstruation on the Symptoms of the Psychoses [De l'influence de la menstruation sur les symptômes des psychoses]. (L'Encéph., December, 1925.) Repond, A.

It has been more or less generally accepted that the menstrual period exercises a definite effect on the course of the psychoses, either aggravating or ameliorating the symptoms (Kraepelin, Marie, Bleuler, de Fursac). In 102 cases of mental disorder investigated by Repond over a period of from six months to three years in 56 of the patients, and of three or four months in the remainder, he found no reason to think that menstruation produced any modification whatever in the usual mental state.

J. S. Annandale.

Psychoses occurring during the Puerperium. (Arch. of Neur. and Psychiat., February, 1926.) Strecker, E. A., and Ebaugh, F. G.

These authors have entered into a detailed study of some 50 psychotic cases which arose during the puerperium, their review embracing such varying standpoints as family history, personality, onset, previous physical and mental record, course, prognosis and treatment.

Their 50 cases included: Manic-depressive psychoses, 18; toxic-exhaustive psychoses, 17; dementia præcox, 13; paresis, 1; psycho-neurosis with psychotic symptoms, 1.

The average age-incidence in these psychoses was: Manic-depressive, 27; toxic-exhaustive, 29; and dementia præcox, 27.

The fact that any psychosis may follow childbirth was clearly established, and heredity was definitely better in those patients who subsequently developed toxic-exhaustive psychoses than it was in the manic-depressive or dementia præcox groups. The percentage of previous pregnancies per patient is such as probably to indicate that the manic-depressive and schizophrenic constitutions are recognized as unstable and repeated pregnancies are avoided. The inference is also drawn that in those who are to develop toxic-exhaustive conditions the soil has already been prepared and resistance reduced. "Symptomatic premonitions" are rare in the toxic-exhaustive group, but in dementia præcox and the manic-depressive psychoses the stress of labour is likely to precipitate, though not to determine a definite psychosis.

The authors state that the chief points brought out in the clinical studies were that "although the occurrence of manic-depressive psychosis is not determined by childbirth, its clinical picture may be coloured by it, and there is greater likelihood of hypermanic states, disturbance of the sensorium and hallucinosis." Contrary to "the usual belief," dementia præcox is said not to deteriorate with unusual rapidity during childbirth. Wm. McWilliam.

### 4. Pathology.

Sclerosis of the Semi-lunar Ganglia in an Anxious Melancholic [Sclérose des ganglions semi-lunaires chez une mélancolique anxieuse]. (Bull. Soc. Clin. de Med. Ment., June, 1923.) Naudascher, M. G.

A woman, æt. 48, who had a complete hysterectomy two years ago, suffered from severe melancholia, with anxiety and refusal of food ever since. At the autopsy the semi-lunar ganglia were found to be greatly enlarged (75 mm.) and sclerosed. The pancreas also was sclerotic. Reference is made to other reported cases of the association of sitophobia with sclerosis of these ganglia.

W. D. CHAMBERS.

Lymphocytoma of the Brain with Secondary Growths in the Liver, in a Chronic Delusional Case [Lymphocytome du cerveau, noyaux secondaires du foie chez une délirante chronique]. (Bull. Soc. Clin. de Med. Ment., June, 1923.) Naudascher, M. G.

A woman, æt. 61, eight years in the asylum, died of uræmia diagnosed clinically and confirmed by the state of the kidneys at autopsy. There were found numerous new growths, rounded, firm and white, in the liver. The upper part of the right temporal muscle was altered to a firm, white, lardaceous tumour which perforated the skull and was continuous with a larger tumour mass inside. The latter formed a layer about half an inch thick over most of the outer surface of the right hemisphere, with a wedge-shaped projection about the middle of the Sylvian fissure. There was some destruction of dura and of brain substance, but no infiltration. The tumour was a lymphocytoma arising from the

bone. Its existence was never suspected until the uræmic coma, the patient's bodily health appeared good and there were no localizing signs at any time. Owing to previous accidents neither pupil could be tested.

W. D. CHAMBERS.

Clinical Results of Estimation of the Ammonia in the Urine [Résultats Cliniques de l'Examen de la Régulation Ammoniacale de l'Urine]. (L'Encéph., March, 1925.) Schröder, G. E.

This paper has special reference to the Hasselbalch-Bisgaard investigation of the urine-ammonia in epileptics. The author records the results of this estimation by a modified method of his own (described in an earlier paper) in 78 cases. Five graphs showing normal and morbid reactions are given. He admits that graphs which he considers morbid do not differ very definitely from those classed as normal. He concludes that disordered excretion of ammonia is constant in true epilepsy, but is not an indication of the chief pathogenic factor, because it is found also in other diseases associated with metabolic or endocrine disturbance and in epidemic encephalitis.

W. D. Chambers.

Erythrocytosis in Artificially Inoculated Malaria. (Ann. of Trop. Med. and Parasit., December, 1925.) Rudolf, G. de M., and Ramsay, J. C.

The authors in four cases examined, two male and two female, found an erythrocytosis preceding the anæmia of malaria. The relation of the increase in red cells to the onset of the fever was very variable; in one case it occurred as late as after the eighth rigor. The anæmia persisted in two cases for eleven and thirteen days respectively after the quinine treatment commenced. In most cases the recovery from the anæmia occurs in twenty-one days.

In two cases there was a post-anæmic erythrocytosis. The hæmoglobin was found in two cases to vary with the red cells, but regeneration was less rapid.

The colour index was of the secondary anæmia type, at times becoming as low as 5. In two cases the number of parasites varied approximately with the degree of fever.

G. W. T. H. FLEMING.

The Colloidal Benzoin Curve in the Cerebro-spinal Fluid. (Fourn. of Neur. and Psychopath., May, 1925.) Payne, W. W.

This article is a record of an investigation of the colloidal benzoin curve of a series of cerebro-spinal fluids, the technique followed being that of the modification described by Riddel and Stewart.

The first stock solution of benzoin is prepared by mixing I grm. of powdered benzoin resin with IO c.c. of absolute alcohol, allowing it to stand for forty-eight hours and then decanting the clear supernatant fluid. The colloidal emulsion is prepared by adding 0.3 c.c. of the stock solution slowly to 20 c.c. of distilled water heated to 35° C.

A second stock solution containing 0.01 per cent. pure NaCl is made.

I c.c. of the NaCl solution is placed in each of six small test-tubes, and I c.c. of the cerebro-spinal fluid to be examined is placed in the first test-tube and the whole mixed. Dilution from test-tube is carried out in five tubes of the series as in the gold-sol test, the sixth being used as a control. One c.c. of the colloidal benzoin solution is now added to each tube, mixed and allowed to stand for twenty-four hours at ordinary room temperature. The tubes are inspected at the end of six hours and twenty-four hours.

The method of reading: Complete discharge of the suspension, giving a white precipitate, is called 2; partial discharge, 1; and no discharge, the fluid equalling the control in opacity, 0.

A series of eleven tables is given compiling results in 127 cases.

The following conclusions are arrived at:

- (1) A typical reaction is obtained in most cases of general paralysis in six hours (22222).
- (2) Curves of the tabetic type are obtained in about 70% of tabetics at the end of twenty-four hours (precipitation in second and third tubes, e.g., 12212).
  - (3) Negative curves are obtained in meningo-vascular syphilis.
- (4) The results of the benzoin curve, while not being absolutely diagnostic, are sufficiently reliable to be of considerable value in the diagnosis of general paralysis and tabes.

  WM. MCWILLIAM.

On the Diminishing Value of the Cell-Count of the Cerebro-spinal Fluid obtained by Lumbar Puncture [Quelques considérations sur la valeur décroissante de la cytose du liquide céphalo-rachidien retiré par la ponction lombaire]. (L'Encéph., July-August, 1924.) Cestan, R., Gay and Pérès.

These authors have compared the cell-count in successive portions of the cerebro-spinal fluid withdrawn by lumbar puncture. The puncture was done while the patient was in the sitting position, and the needle was entered between the fourth and fifth lumbar vertebræ. The fluid was collected centimetre by centimetre in a series of graduated and numbered tubes, so that each centimetre came from a different level of the canal. It was found that the fifth centimetre contained many less cell elements than the first centimetre, as did the tenth centimetre when compared with the fifth, but to a less marked degree. These results would indicate that a process of sedimentation takes place. By producing an artificial aseptic meningitis, and thereby a great increase of the cellular elements of the spinal fluid, this phenomenon was made more evident. authors point out the bearing that this may have in cases of meningeal involvement such as is met with in cases of old tabes, and also adduce this sedimentation process as adding weight to their theory that there is no true circulation of spinal fluid, but that it can be compared to fluid in a closed vessel subjected to certain oscillations due to circulatory and respiratory movements, and that in a person in the upright position the force of gravity would tend to cause the accumulation of the cells in the sacro-lumbar region.

J. S. Annandale.

#### 5. Treatment.

Effective Action of Quinidine in the Obstinate Tachyarrythmia of Graves's Disease [Action efficace de la quinidine dans la tachyarythmie basedowienne irreductible]. (L'Encéph., April, 1925.) Trenel, M., and Vuillame, M.

An account of two cases which responded well and permanently to this treatment. Speculations as to its action are included and the possible dangers of its administration noted.

W. D. CHAMBERS.

A Case of Anxiety with Arterial Hypo-tension, Treated with Adrenalin [Anxiété avec hypotension artérielle, traitement par l'adrenaline]. (Bull. Soc. Clin. de Med. Ment., May, 1923.) Naudascher, M. G.

The account of the case of a woman, æt. 41, in a state of agitated anxiety, with verbal hallucinations of hearing, severe asthenia, feeble cardiac action and very low blood-pressure. Treated with one half milligramme of adrenalin subcutaneously twice daily. The anxiety disappeared in nineteen days, blood-pressure rose by 60% and all the bodily signs improved greatly.

W. D. CHAMBERS.

Acute Delirium in the Course of Anxious Melancholia; Pathogeny and Treatment [Délire aigu au cours d'une mélancolie anxieuse; Pathogénie et Traitement]. (L'Encéph., May, 1921.) Damaye, H.

The author considers that acute delirium and delirium tremens have a common origin, with certain signs of alcoholic poisoning superadded in the latter. Both should be treated with the appropriate sera and with electrargol. A case of septicæmic delirium, due to staphylococci, developing in an anxious melancholic is described. Treated with electrargol 20 c.c. on the first and second days, 5 c.c. on the third and fifth days, along with camphor, strychnine, and 20 c.c. antipneumococcic serum on the fourth day, the case did well, recovery from the melancholia taking place four months after the delirium.

W. D. Chambers.

Treatment of General Paralysis by Malarial Inoculation [Le traitement de la paralysie générale par l'inoculation malarique (fièvre tierce)]. (Fourn. Neur. et Psychiat., Num. Neur. 1, 1924.) Ley, A.

The shortest possible description of this mode of treatment, with an offer to assist in applying it. No results are published.

W. D. Chambers.

Treatment of General Paralysis by Injections of Lacto-protein and Sulfarsenol [Traitement de la Paralysis générale par les Injections de Lacto-protéine et de Sulpharsénol]. (Bull. Soc. Clin. de Med. Ment., May-June, 1924.) Naudascher, G., Chanes, C., and Corbier, A.

Three cases are presented to illustrate the effect of combined treatment by sulfarsenol and milk protein. All the cases were

far advanced in the disease; in one dementia was well established. The further progress of the disease was checked in all, but there was little mental improvement; the clinical findings remained practically unchanged.

D. Ewen Cameron.

Treatment of General Paralysis by Sulfarsenol and Pyrogenic Substances [Traitement de la Paralysis générale par le sulpharsénol et les pyrotogènes]. (Bull. Soc. Clin. de Med. Ment., May-June, 1924.) Guiraud and Sonn.

The pyrogenic substance used here is a soluble protein. Treatment is initiated after a very careful physical examination, one of the contra-indications emphasized being vagotonia.

All the cases mentioned, ten in number, show well-marked remissions and an improvement in their mental and physical health. Serological findings are but little affected. The authors stress the fact that even those features, such as dementia or amnesia, which one might be justified in regarding as evidence of gross cerebral changes, undergo a remarkable amelioration.

D. EWEN CAMERON.

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On a New Hypnotic: Somnifen [Sur un nouvel hypnotique: le somnifène]. (Journ. Neur. and Psychiat., Num. Psych. 3, 1923.) Hoven, H.

Dr. Henri Hoven quotes a series of cases in which this hypnotic has been used. His results show that somnifen is, in certain cases, a sedative of the first order, and especially indicated in states of agitation.

J. S. IAN SKOTTOWE.

Therapy in States of Maniacal Excitement [Les remèdes actuels contre l'excitation maniaque]. (Journ. Neur. and Psychiat., Num. Psych. 3, 1923.) Maere.

Dr. Maere reviews this question, and discusses the advantages and disadvantages of such drugs as trional, sulphonal, veronal, etc. He deals with the question of baths, hot packs, etc. His article applies solely to the symptomatic treatment of states of excitement, and is not intended to discuss the treatment of the underlying psychosis.

J. S. IAN SKOTTOWE.

Intravenous Injection of Somnisen in Psychiatric Practice [Note sur l'injection endo-veineuse de Somnisène en pratique psychiatrique].

(Ann. Méd.-Psych., November, 1924.) Levet, M.

The use of somnifen hypodermically—either preceded or not by a hypodermic of scopolamine morphine—every eight hours is recognized as a means of preventing exhaustion in cases of acute excitement. The use of the drug by the intravenous route is more rapid and sure, and is as innocuous as the hypodermic method. The sedative action occurs in two phases—a rapid narcotic effect, followed some hours later by a period of torpidity, from which the patient can be roused to take food. Two c.c. are usually sufficient

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to ensure the desired effect, but the author has given as much as six c.c. at one injection under exceptional conditions. Manic-depressive cases are less sensitive than others. Organic and confusional cases are readily affected by this sedative. A tolerance is fairly quickly acquired, and other objections to the repeated use of the drug are the scarring of the skin, and occasionally obliteration of the vein if the injections are performed frequently.

Levet recommends the use of somnifen in lumbar puncture, and in tube-feeding in resistive and intractable patients for its sedative effects.

J. S. Annandale.

The Treatment of Anxiety States by Luminal in Fractional Doses [Le traitement des états anxieux par le gardénal à doses réfractées]. (Ann. Méd.-Psych., November, 1924.) Dupouy, R., and Montassut, M.

The authors claim that the best effects of this drug are got by administering it in fractional doses of of grm. every hour while the patient is awake. The patient is not roused from sleep for his dose. In cases of insomnia the drug is given every hour until the desired effect is obtained. Anxiety and insomnia quickly diminish. The patient obtains a sense of calm and of increased well-being. The hebetude, sluggishness and the excitement sometimes seen when large doses are administered are not observed. The daily dose should never exceed '2 grm., thus there is little chance of producing toxic effects. Anxiety states, as well as obsessional cases, and involutional and presentle melancholiacs do well, but in ordinary melancholia the results are not so good.

J. S. Annandale.

A New Method of Psychological Investigation [Un nouveau procédé d'investigation psychologique; l'éthérisation]. (L'Encéph., July-August, 1924.) Claude, H., Borel, A., and Robin, G.

The difficulty of examination of cases of dementia præcox has often been remarked, as the patient's lack of attention and incoherence are obstacles not easily overcome. The authors stress the frequency with which one sees cases of long standing where the mental enfeeblement is eventually found to be much more apparent than real. This applies more particularly to the schizophrenic form (Bleuler), where, in spite of a seeming dementia, the mental faculties are often conserved to a remarkable degree. By making an interrogation during the stage of obfuscation produced by ether anæsthesia, when the resistances, subconscious or unconscious, are in abeyance, the authors have been able, in many instances, to lay bare facts of importance in the ætiology of the individual case, and to get information from the patient entirely inaccessible by other means, thus tending to show that in these patients there is a true mental dissociation in contrast to the hebephreno-catatonic type, in which the mental deterioration is indisputable, and in whom this mode of investigation is found to be useless. I. S. Annandale.

Sodium Iodide Therapy in Post-Encephalitic Psychosis. (The State Hosp. Quart., February, 1926.) Castro, H. R.

The author reports on the treatment of 16 cases, in 10 of which the psychotic symptoms were noted immediately after the acute attack. The change was characterized by irritability, excitability, stubbornness, and marked instability in the emotional sphere.

The author reviews the various techniques in the sodium iodide treatment and then proceeds to detail that used by himself. It consists of intravenous injections twice a week of sodium iodide in sterilized water, re-sterilizing the solution before each injection. During the first three months 100 c.c. of a 5 per cent. solution were given, but later the strength was raised to 10% and the quantity diminished to 50 c.c: It has been his aim to stop at the eighteenth injection, when the patient had received a total of 90 grm. of sodium iodide.

During treatment there have been no signs of iodism, the only

effect patients complain of being a peculiar saline taste.

In 6 cases there followed improvement, which was less marked in the neurological aspect than the mental one. Irritable and excited patients became sociable and agreeable, and in one case where the irritability was combined with peculiar convulsions, the patient became completely stable and the convulsions ceased.

WM. McWilliam.

### 6. Sociology.

Mental Hygiene [L'Hygiène Mentale]. (Journ. Neur. et Psychiat., Num. Neur. 1, 1923.) Crocq, J.

In a brief survey of the evolution of mental hygiene Dr. Croca outlines its progress from the days of Hippocrates to the inception of the modern era by Pinel. He advances the opinion that for healthy mental functioning a healthy brain is essential. On this he bases a regimen of moderation operating from earliest days until old age. The question of the parents' health is considered and the necessity of a clean bill of health before marriage is urged; as in the careful supervision of the mother's health during pregnancy, Dr. Crocq advocates the disuse of alcohol, of tea and coffee: he describes the tendency to overwork in adolescence, and even for the adult he recommends that six hours a day should be given to meals and recreations, while eight are required for sleep. Turning from the normal to the abnormal, he states that he considers that there are at least as many persons at liberty who should be under treatment as those who actually are. In addition to these, whom he calls the "grands mentaux," there is a very large group. the "petits mentaux," which includes the psychoneurotics, the mild defectives and those generally who are ill-adapted to life. Dr. Crocq points out that for this latter group little provision has as yet been made, and he urges the establishment of hospitals run much on the lines of the general hospital, admission to which shall not require certification. The establishment of teaching centres and of out-patient cliniques where patients may receive advice and report progress from time to time receives his favourable attention.

D. EWEN CAMERON.

Alcohol and Cocaine—a Criminological Parallel [Alcool et Cocaine— Parallele Criminologique]. (Journ. Neur. et Psychiat., Num. Psych. 4, 1924.) d'Hollander.

The author considers that too much importance is attached to morphia and cocaine as criminal factors when compared to alcohol. He examined the records of prisoners in Louvain, and found among 520 urban and long-sentence criminals less than 1% addicted to cocaine, and in 191 minor criminals, no addicts. On the other hand, he found that over 50% of the prisoners were heavy drinkers, if not drunkards, and that 14.4% of the serious crimes and 11.4% of lesser offences were committed in a state of intoxication.

W. D. CHAMBERS.

Attenuated Responsibility: Obsessions [Responsabilité attenuée obsessions]. (Journ. Neur. et Psychiat., Num. Psych. 4, 1923.) Benon, R.

Dr. R. Benon gives a complete record of the case of a sergeant-major who developed a mental illness with alarming behaviour.

The patient deserted from his unit, took a long journey, expressed grandiose ideas—ideas of the transformation of the personality—and was the victim of obsessions and impulsive; his conduct was extravagant and voluptuous. The history is interesting, in that it shows a rather schizoid personality together with previous infection with syphilis and malaria and prolonged period of captivity. The physical signs showed no evidence of neuro-syphilis. The case is discussed in its medico-legal aspects.

J. S. IAN SKOTTOWE.

On the Necessity and Urgency of Measures of Social Protection in Regard to Anti-Social Mental Patients [Sur la nécessité et l'urgence de mesures de protection sociale à l'egard des aliénès antisociaux]. (Journ. Neur. et Psychiat., Num. Psych. 2, 1924.) Crocq, J.

Prof. Crocq discusses this question from the social and medicolegal standpoint; he takes up the question of mentally ill persons who are (a) at large, (b) who have been discharged from an institution.

Referring to the first category he states that any mentally ill person is a potential criminal, whether a paranoiac, a drunkard or a case of dementia præcox, of general paralysis or a senile dement.

It devolves upon the medical attendant to warn the relative that anti-social acts may occur.

He deplores the fact that the specialist is seldom consulted, and that the general practitioner is not sufficiently well acquainted with mental illness.

He says this question must be met because of the social danger

that exists, and that it should be met on the same grounds that one meets the dangers dependent upon infectious illness for example.

He puts forward a plea for the Public Health Department dealing

with such cases and recommends propaganda.

He discusses the difficulties with patients who have left institutions

and the administration of Belgian law on the subject.

He does not believe that the superintendent of an asylum should have the power to declare such a case recovered, but that all such cases should come under the jurisdiction of a board of psychiatrists.

J. S. IAN SKOTTOWE.

Criticism of a Proposed Law regarding the Dissolution of Marriage on Account of Insanity of one of the Couple [Critique du projet de loi sur le divorce]. (Journ. Neur. et Psychiat., Num. Psych. 3, 1924.) Ley, R.

The law is summarized under three heads for the purpose of discussion:

- (I) When, in the course of marriage, one of the parties becomes affected with incurable insanity and has been confined for at least three years in a place of detention, the other party may demand the dissolution of the marriage.
- (2) The request to be supported by a statement of the director of the place of detention stating that the patient has been confined at least three years and that his condition appears incurable.

(3) Judgment to be given within six months of a report by one

medical expert.

Dr. Ley attacks the proposed law on the grounds principally that the period of three years is too short; that cures may result after that period, and that the opinion of one medical expert is not sufficient in such a matter. Finally he objects to dissolution of the marriage rather than divorce on the ground that this is a reintroduction of "civil death."

D. EWEN CAMERON.

The Special Pavilion in the Asylum of Tournai [Le Pavillon spécial de l'Aisle de Tournai]. (Journ. Neur. et Psychiat., Num. Psych. 6, 1923.) Oliviers.

A description of the asylum at Tournai (Belgium), where the male criminal lunatics and delinquents of that country are placed, and particularly of the special building, not yet quite completed, for the most dangerous and intractable cases. The author deplores the necessity, while admitting it, for segregating such cases. The asylum contains 652 patients, of whom 406 are either convicted or remanded cases, including 70 insane murderers. Apart from the special wards, the institution is run on mental hospital lines rather than as a prison (in 1922 there were 11 escapes, 9 of them police cases).

The special pavilion now being completed is described and illustrated. It is intended for 60 beds, divided into four wards. and there are 26 single rooms. The windows have strong iron frames, but are of generous size.

A variety of occupation is provided. The patients are doing the painting of the building; some make paper bags, or straw seats for chairs; there is a knitting machine and a loom is to be bought. There is one shoe-maker.

The account concludes with a list of the crimes and offences of W. D. CHAMBERS. the patients.

The Psychiatric Annexes of the Belgian Prisons [Le fonctionnement des Annexes psychiatriques des prisons belges]. (Journ. Neur. et Psychiat., Num. Psych. 5, 1924.) Vervaeck, L.

Dr. Vervaeck describes the mode of working of the psychiatric annexes to the Belgian prisons, of which there are now four. aim of these institutions is threefold: Firstly, to enable an expert opinion to be formed regarding the mental states of accused persons where a plea of insanity is set up; secondly, to investigate the condition of those persons who have developed a nervous disorder in the course of their internments; and finally to act as a training school for alienists and prison officials. Once a diagnosis has been formed either in the case of an accused person or one who is serving a term of imprisonment, the person is transferred to other institutions according to his state.

Fully half improve and are returned to prison; a certain number are sent to various colonies, such as the epileptics, and a few are liberated. The larger proportion of those admitted are of a psychopathic constitution; some are described as suffering from nervous disorders. It is interesting to note that cases of stimulation account for only 5.4% of admissions.

The management of the institution is in the hands of a medical officer who has had previous psychiatric experience. To assist him there are a number of warders, most of whom have also been trained in asylums. The discipline of the annexe is maintained as far as possible on the same level as in the prison. Food is the same, letters and visitors are controlled by the medical officer, so that in no way can admission to an annexe be looked upon as a means of escape from the irksomeness of prison life. Observation is constant; all that the patient says or does is taken down, and with a report of his physical and mental state is forwarded to the medical experts who are in charge of his case. D. EWEN CAMERON.

The Effect of the Law of August 29, 1919, Prohibiting the Retail Sale of Distilled Alcohol on the Diminution of the Psychoses in Belgium [Influence de la loi du 29 Août, 1919, prohibant la vente au détail des boissons alcooliques distillées, sur la diminution des psychoses en Belgique]. (Journ. Neur. et Psychiat., Num. Psych. 5, 1924.) Boulenger.

Dr. Boulenger, in discussing the matter of the admission-rate into the Belgian asylums, quotes the figures from the St. Jean Asylum at Brussels and of Stuyvenberg at Anvers. During the war there was a great reduction in the amount of alcohol consumed, and with it there was a falling off in the number of admissions to these institutions, especially of those persons suffering from alcoholic

psychoses.

In 1913 the admissions to St. Jean numbered 276, of these 21.01% were suffering from alcoholic psychoses; in 1916, 216 cases were admitted, in which alcohol accounted for 4.1%. In 1923, when the effects of war-time restrictions may be supposed to have passed off and the true effect of the 1919 law be observed, admissions were 282, of which 8.51% were suffering from alcoholic psychosis. Of recent years the percentage of alcoholic psychosis is tending to rise slightly; this is ascribed to defects in the constitution of the law. An interesting observation is that while in 1913 the number of male patients was 9,286 paupers and 1,481 paying patients, and the number of females 7,614 paupers and 1,232 paying patients, since restrictions have been imposed there has been a steady change in the proportion of men and women patients until, in 1923, the figures are 6,610 pauper and 961 paying male patients as compared to 7,264 pauper and 1,425 paying female patients.

D. EWEN CAMERON.

#### 7. Mental Hospital and other Reports.

The Maudsley Hospital.—In his second annual report Dr. Mapother points out that no modification of policy of any moment has been found necessary as a result of the first year's experience, and the total treated during the year was 1,304, with 590 in-patients, as against 1,012 and 452 in-patients in the previous year. The demand for vacancies has been so much greater for females than males that one of the men's wards has been completely devoted to the use of female patients, giving hospital accommodation for 96 women and 48 men. Classification of types and specialization of wards to meet this is, of course, an inevitable difficulty in a hospital such as this, which has, on the whole, been successfully coped with; and a graphic record of the source whence the applications for admission chiefly come clearly shows, as pointed out by Dr. Mapother, the demand for hospitals of this type in other parts of London.

Dr. Mapother successfully meets and confutes the superficial comments frequently made on the types of admission to the Maudsley Hospital, and concludes as follows:

"It is easy to supplement the resources of our wards as regards chronic neuroses and psychoses. Such can be seen in the out-patient department or brought up from the ordinary mental hospitals; cases showing confusional states and severe emotional disturbances cannot be transported.

"The argument as to the deterrent effect of such cases appears to be unfounded. There appears to be no tendency for applications by suitable cases of the milder types to fall off. Such applications are in fact always adequate to keep full those wards reserved for patients whose symptoms are far too slight to qualify them for treatment in any ordinary mental hospital—most of them suffering from what would be universally diagnosed as 'neuroses.' The proportion of cases of 'neurosis' to 'psychosis' among those treated here is shown by the statistical tables to be higher in the second year than in the first. It is probably true that there is a class of neurotics—usually somewhat chronic—who regard their symptoms (often with a certain pride) as evidence of a higher sensitiveness rather than as mental disorder, and who may be deterred by the idea of associating with

undeniable cases of the latter. Such neurotics are not the type for whom the wards here are intended; to say this implies no lack of sympathy for them.

"If one attempts to admit even mild cases of mental disorder at a really early stage in the attack and to treat them as long as there is reasonable hope of recovery, it is simply unavoidable to have special wards treating graver forms of psychosis. It is impossible at an early stage to distinguish cases that will become severe from those that will not in the given attack progress beyond neurosis.

"Those who make the contradictory criticisms that have been quoted overlook the fact that to a very large extent the patients in each kind of ward have been, or will be during their stay here, in the other kind. At any time half the population of the acute wards consists of cases transferred from the upper ones, where they had been admitted with very mild symptoms. The issue therefore is merely whether the ward for patients with severe symptoms should be reduced in size by refusal of cases where such have already developed before application. I can see no advantage in this partial policy, and it is certain that the refusal or discharge of patients with symptoms that are acute in both senses would involve rejection of many of the cases that are most fully and permanently recoverable."

The out-patient department continues its useful work to the community, the total number treated during the year being 1,045 (males 397, females 648). A considerable number were able to be treated as out-patients to either recovery or improvement, but a large proportion had to be admitted, and this appears to be to a great extent the chief source of admissions.

Treatment of in-patients has been by a combination of various measures—medicine, open-air, massage, remedial exercises, electricity, occupation and diversion—resulting in the complete recovery of 112 cases, or 25% of the admissions for the year. The stability of these recoveries is tested by the method the hospital has initiated of keeping in touch with the patient or his friends for a considerable period after discharge.

The closeness of contact that is maintained with King's College Hospital is of invaluable service in carrying out special treatment, and the same consultant specialists are attached to both hospitals.

Treatment by induction-malaria in cases of general paralysis has only been used in a few cases, for excellent reasons given, but of six cases treated during the first year, three died and one deteriorated, one improved sufficiently to remain at home, and in the other case a very complete remission occurred, which was still maintained at the date of the report.

Treatment of neuro-syphilis (locomotor ataxy or general paralysis) with tryparsamide was carried out in 20 cases by Dr. Dawson (the results will be published elsewhere).

"Briefly it may be said that the method appears safe, but it is doubtful whether results are of a distinctive kind such as would clearly be unobtainable by means of other arsenic compounds. Of the 20 cases, 2 died, and of the rest 13 showed improvement clinically, or as regards the serological findings. The changes of the two kinds do not appear necessarily to coincide."

During the first two years 45 cases of encephalitis lethargica have presented themselves, and Dr. Mapother notes how frequently the initial stages are missed, and how difficult is the diagnosis at times between it and simple melancholia. Drug treatment appeared only to be palliative.

Treatment by continuous twilight sleep in conditions of agitation

and restlessness (especially associated with hallucinations) led to disappointing results in all the cases in which it was tried, somnifen being the drug employed.

A considerable amount of valuable work has been done by Dr. Barkas in connection with the scientific observations of patients under treatment with glandular extracts; the results will be published when completed.

Dr. Mapother's remarks upon the nomenclature employed in the statistical tables are worth quoting:

"In the 'Organic' group are included all cases connected with obvious physical causes or symptoms, and in the 'Functional' those where such connection is absent. Where possible every case is referred to the former group and the latter diagnosis is reached by exclusion. It includes, however, the great majority of cases, those where such factors as a neuropathic constitution (whether hereditary or not) and mental experience (either recent or remote) interact in varying degrees

in production

"The subdivision of the 'functional' group has been modified by the exclusion of all terms purporting to have any sort of prognostic significance, and substitution of others that are meant to be merely descriptive of the predominant anomaly of reaction at the time when the patient is seen. Under the conditions existing here often no more than the latter is possible, and especially in the case of outpatients. One is increasingly impressed by the difficulty of basing prognosis on form of symptoms early in the course of mental disorder and even after opportunity of observation for some months. It is possible to predict the future from the past where a history of prolonged insidious development or previous attacks is present. But any table including forecasts about cases where such history is present and those where it is absent must be a mixture of certainties and speculation. It appears better in classifying our cases showing functional mental syndromes to attempt simply a record of observed fact rather than to mix this with guesses of very doubtful value."

In the report of the Almoner of the hospital, the co-operation of many social and philanthropic bodies is a most pleasing feature in connection with the care and after-care of patients, and full use is made of the services of such bodies as the Charity Organization Society, the Church Army and the Mental After-Care Association.

The report of the Director of the Pathological Laboratory, Dr. Golla, though short, is most inspiring reading, presenting as it does an array of scientific workers and an amount of conscientious and earnest work which is entirely admirable, and the vigour and life in the laboratory is in marked contrast to the post-war paralysis and faded scientific morale complained of by the "Gelehrter" in some parts of Europe.

Besford Court Catholic Mental Welfare Hospital for Children.— This is an interesting institution, housed in a beautiful building about six miles south of Worcester and four from Pershore. It has attached to it eleven physicians and surgeons from a wide area, forming an honorary medical staff, two medical officers and a dental surgeon, and in addition an honorary medical referee. The Administrator and Superintendent is the Right Rev. Monsignor Newsome, and the Honorary Assistant Superintendent Dr. B. J. Mullin.

The report is for the year 1925, and is full of interest. It is clear that only the higher class of defectives is accepted, which, of course, gives this institution an advantage as compared with a similar one belonging to a local administrative area, but a perusal of the report leaves us with the impression that this segregation of type is probably sound in principle and an important element in character formation, which is the chief aim of an institution such as this, and a great deal of the success which is obtained here is no doubt due to the high ideals of the trainer, the gentle disciplinary atmosphere of the church, and the clearly defined principle that the true end of manual training is education (in the best and widest sense of the word) and not production. Monsignor Newsome is in complete agreement, as would be expected, with the conclusions of the Central Association for Mental Welfare on sterilization as a means of meeting the mental deficiency problem, though we are inclined to think he would alter the words "at the present time" into "at all"; he also emphasizes the point, too often forgotten, that mental defectives of the higher grades are by far the most numerous, and, if left to themselves, by far the most dangerous to the community. A considerable space is devoted to a discussion of the subject of instinct as a foundation of behaviour, and the existence of a moral sense, ending with a wholesome note of doubt as to whether there is such a thing as moral imbecility at all.

The whole report is extremely well brought out both in manner and matter, and the illustrations are exceedingly good and well chosen for the purpose of the report, and the high ideal aimed at is to be read in the concluding paragraph:

"At Besford we are engaged in pioneer work . . . . we are pilots of a laden ship steering a course over strange waters. We carry a precious freight—more precious than Cæsar and his fortunes—a freight of helpless mites of humanity whose lives and happiness are ours to make or mar."

Victoria (Australia) Mental Hospitals, 1924.—The smallest of the States of the Australian mainland (rather less than twice the size of England and Wales), and one which has the greatest extent of land under cultivation relatively to population, has nine mental hospitals (one exclusively reserved for idiots) and a ratio of insane to population of I to 268, as against I to 245 thirteen years ago. The Inspector-General of the Insane in his report draws attention to the fact that there is great necessity for a new institution to serve the coastal Gippsland area to the south-east of Melbourne.

The total number of patients in State institutions is 5,366, the largest number being in the two institutions of Kew, close to Melbourne and Sunbury in co. Bourke, some twenty miles to the N.W. A whole-time dentist has been appointed, who visits in turn the institutions at Kew, Sunbury and Mont Park (Military). The appointment of a whole-time pathologist to the Department is an advance of considerable importance, which appears to be considerably discounted by the fact that he is compelled to make a post-mortem examination on every patient dying in the Metropolitan institutions and licensed houses, and attend the Coroner's inquiries relating thereto—perhaps the most certain way of killing the scientific zeal and initiative of a skilled pathologist and rendering

null and void a valuable appointment. Dr. Ernest Jones (Inspector-General) is satisfied that the receiving houses have achieved a distinct success in that country, but still pleads for the need for psychiatric clinics.

Bengal Mental Hospitals, 1924.—In a monograph by Sir Andrew Halliday, dated 1828, it is stated that there were, under the Bengal Government at that date, six hospitals in which mental cases were treated: (1) The twenty-four Pergunnahs at Calcutta, (2) Dacca, (3) Moorshedabad, (4) Patna, (5) Benares, (6) Bareilly. The provision now made by the Government of Bengal for mental cases consists of two mental hospitals at Dacca and Barhampore (in the Murshedabad district, some hundred miles north of Calcutta), together with a small observation ward at Bhowanipore, and a mental ward attached to the Albert Victor Leper Hospital at Gobra (in the Khulna district). The total population of these, excluding the observation ward, was 1,172, as compared with 1,186 in the previous year; 224 cases were admitted during the year as against 213 in the previous year, and the recovery-rate for the year was approximately 38% calculated on the admissions. Colonel Wilson, the officiating Surgeon-General with the Government of Bengal, reports that the buildings in connection with the New Indian Mental Hospital at Ranchi (in the Lohardga district) are nearly complete, and will be ready for occupation in September.

#### Part IV.-Notes and News.

# THE ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION. POSTPONED QUARTERLY MEETING.

THE QUARTERLY MEETING of the Association summoned for May 18, 1926, had to be postponed owing to difficulties of travelling, the outcome of the general industrial strike and cessation of work in the coal-fields.

On June 1 the Council and various standing Committees met and transacted all the business which would ordinarily have come up at the May quarterly meeting had it been held.

#### SOUTH-EASTERN DIVISION.

THE SPRING MEETING of the Division was held by the invitation of Dr. D. F. Rambaut at St. Andrew's Hospital, Northampton, on Thursday, April 1, 1926.

There were 23 members present.

The members were shown round the hospital and grounds and were then entertained to luncheon, at the conclusion of which Dr. NATHAN RAW proposed the health of Dr. Rambaut, to which the latter replied.

The meeting was held at 2.15 p.m. Dr. J. Chambers occupied the chair.

The minutes of the last meeting were taken as read and confirmed.

Dr. Noel Sergeant was elected Hon. Divisional Secretary, and Drs. A. Helen A. Boyle, H. Wolseley-Lewis, R. C. Turnbull and N. R. Phillips Representative Members of the Council.

Drs. A. H. A. Boyle, C. W. Bower and N. R. Phillips were elected members of the Divisional Committee of Management. The following candidate, after ballot, was unanimously elected an ordinary member of the Association:

ALEXANDER GRIGOR McCALLUM, M.B., Ch.B.Glasg., Assistant Medical Officer, Peckham House, London, N. 4.

Proposed by Drs. F. R. King, B. Hart and F. Dillon.

Dr. C. McDowall's kind invitation to hold the Autumn Meeting at Ticehurst was accepted with acclamation.

Dr. RAMBAUT then read his communication entitled "Notes on a New Reception Hospital at St. Andrew's Hospital, Northampton," and Drs. Chambers, D. Bower, Turnbull and others took part in the discussion which ensued.

The members then had the privilege of seeing the new hospital now in course of construction, and had explained to them the many noteworthy features that are being incorporated, after which they were entertained to tea by Dr. Rambaut.

#### SOUTH-WESTERN DIVISION.

THE SPRING MEETING of the Division was held, by kind invitation of Dr. E. Barton White and the Committee of Visitors, at the Bristol City Mental Hospital, Fishponds, on Thursday, April 29, 1926.

There were present 22 members and 9 visitors, including the Chairman of the Committee and most of the Consulting Staff of the Hospital.

Dr. Barton White was voted to the Chair.

The minutes of the last meeting were confirmed and signed.

The Hon. Secretary reported that since the last meeting two members of the Division had died, namely, Dr. W. C. Sullivan, of Broadmoor, and Dr. Shera, of Wells. A vote of condolence with the relatives was passed in silence.

Dr. W. Starkey was re-elected Hon. Divisional Secretary, and Drs. Eager and Soutar Representative Members of Council. Drs. F. Dudley and J. D. Thomas were elected to fill the vacancies on the Committee of Management occasioned by the death of Dr. Shera and the retirement in rotation of Dr. J. G. Smith.

A letter from the Treasurer was read announcing that the Association had been granted a Charter, and asking the opinion of the Division as to whether a grant of arms should be sought. The meeting agreed that this should be done.

It was proposed by Dr. McGARVEY and seconded by Dr. S. E. MARTIN that the present fee of 5s. charged to nurses for the Final Nursing Certificate should be abolished, and this was passed unanimously.

The following candidate, after ballot, was unanimously elected an ordinary member:

ARTHUR DARLINGTON, B.A., M.B., Ch.B.Dubl., D.P.H., Deputy Medical Superintendent, Wells Mental Hospital.

Proposed by Drs. J. McGarvey, W. Starkey, and H. B. Wilkinson.

The Autumn Meeting of the Division was fixed for Thursday, October 28, 1926, at the Hereford Mental Hospital, on the kind invitation of Dr. J. G. Smith.

Dr. Barton White then read his paper on "A Case of Pellagra," and this was followed by an account of the pathology of the case by Dr. G. Hadfield, illustrated by lantern-slides. The paper was discussed by Drs. W. F. Nelis, R. Eager, J. McGarvey and W. Starkey.

Dr. H. SMITH then read a paper on "Modifications of the Sachs-Georgi Test used to Determine the Incidence of Syphilis in those Admitted to a Mental Hospital."

Dr. G. Hadfield exhibited, in the new Pathological Laboratory which has recently been added to the Hospital, pathological specimens and gave a demonstration of the Kafka reaction in cerebro-spinal fluid and of Anderson's neuroglia stain.

During the morning members had the opportunity of inspecting the institution, and were most hospitably entertained to lunch, at which the Chairman of the Visiting Committee, Councillor F. E. Metcalfe, presided. In a happy speech he welcomed the members, and expressed his appreciation of the work of the Association. A hearty vote of thanks, proposed by Dr. Nells, was accorded to Dr. Barton White and the Committee for their kind hospitality.

#### NORTHERN AND MIDLAND DIVISION.

THE SPRING MEETING of the Division was held at the Gateshead Mental Hospital, Stannington, Northumberland, on Thursday, April 29, 1926, by the courtesy of Dr. J. B. Tighe, who entertained the members to lunch.

Dr. J. B. Tighe occupied the Chair.

The minutes of the last meeting were read, confirmed and signed by the Chairman.

The following candidate was balloted for as an ordinary member of the Association, and was duly elected:

REGINALD ERNEST ILLINGWORTH, L.R.C.P., L.R.C.S.Edin., Deputy Medical Superintendent, Northumberland County Mental Hospital, Morpeth.

Proposed by Drs. MacPhail, Gray and Gilmour.

Dr. J. R. Gilmour was re-elected Secretary to the Division.

Drs. H. Dove Cormac, J. B. Tighe and Neil Macleod were elected as Representative Members of Council.

Dr. M. A. Archdale read a paper entitled "Some Remarks on Mental Treatment in Mental Hospitals." He said he had not used psycho-analysis much except in a superficial way, sufficient to afford information for suggestion and persuasion treatment.

He thought psycho-analysis had special value for prophylaxis after recovering from a psychotic attack.

Under the title of "Individual Suggestion" he discussed the merits of (1) hypnotism, (2) suggestion in the waking state, (3) methods of inducing relaxation of mind and body, (4) persuasion, and (5) auto-suggestion.

He said he had gradually come to combine heterosuggestion, persuasion and auto-suggestion, and he showed two printed lists of sentences containing suitable suggestions for certain mental states. Sentences from one list were repeated by a nurse to the patient according to direction, and those from the other list were repeated aloud by the patient under the supervision of the nurse.

repeated aloud by the patient under the supervision of the nurse.

Under the title of "General Suggestion" he discussed a number of details in mental hospital management, arranging his remarks under (1) the hospital atmosphere, (2) tone of the nurses, (3) points about the admission wards, (4) applied psychology for ward sisters and charge nurses, (5) discharge of patients, (6) attitude of whole staff, (7) occupation therapy.

Under the last heading he described the token payment and canteen system at Ryhope, and showed samples of the token, with suggestions printed in favour of the benefits of work, etc.

Dr. J. B. Tight then read "Notes on a Case of Epileptiform Seizures associated with Symptoms of Disease of the Pituitary Body."

The patient was a colliery driver, set. 17, who was admitted to the hospital in May, 1925. There was no evidence of mental instability in the family history and nothing of note in the personal history. The lad was noisy, exalted and impulsive on his admission. There were signs of pituitary shortage. He developed a series of fits, associated with a low diastolic blood-pressure of 50 mm. Under treatment by whole pituitary gland, 6 grains per diem, there was steady improvement, and for a time cessation of fits.

The subsequent history of the patient showed a return of the epilepsy. The case led to an interesting discussion.

There was an informal discussion on the Board of Control's Circular 677.

#### IRISH DIVISION.

THE SPRING MEETING of the Division was held, by the invitation of Dr. Richard R. Leeper, at St. Patrick's Hospital, Dublin, on Thursday, April 22, 1926.

There were 19 members present.

The minutes of the previous meeting were read, approved and signed by the Chairman.

Correspondence was read from the Hon. Treasurer and the Hon. Secretary of the Association rs the new Charter and suggested amendment of the Bye-Laws of the Association. It was decided that in the event of a grant of arms being given to the Association, a suitable representation of Ireland be embodied by

the Herald Office, and that Sir Neville Wilkinson, Ulster King-at-Arms, be consulted on the matter by the Herald Office if necessary

The meeting next considered the lack of representation of its members upon the General Nursing Council of the Irish Free State, and it was resolved that the present Advisory Committee, composed of Dr. D. L. Kelly, Dr. J. O'C. Donelan and Dr. Leeper be appointed as a deputation of the Association to wait upon the Local Government Minister to lay the case before him and to solicit his attention to this matter.

The meeting then continued the discussion inaugurated at the last meeting (vide vol. lxxi, 1925, p. 625) by Dr. Norman Graham on the malarial treatment of general paralysis. Dr. Graham kindly produced a typewritten synopsis of his valuable work and a very interesting discussion followed.

Dr. Dunne, who had worked on similar lines, read a synopsis of his work, with the results of his treatment of general paralytic patients in the Grangegorman

Mental Hospital (vide p. 343).

Dr. J. O'C. Donelan, Dr. M. J. Nolan, Dr. L. Gavin and Dr. T. A. Greene took part in this discussion, and a hearty vote of thanks was tendered to Drs. Graham and Dunne for their valuable communications, and expressions of satisfaction were general that such promising results had been obtained. The results which they recorded were keenly appreciated, and it was the unanimous feeling of the meeting that a valuable remedy for general paralysis had been found in many cases. It was felt that in regard to this treatment the pessimists of 1925 were now optimists in 1926. And Dr. J. O'C. Donelan confessed to his now being convinced of the great value of this treatment, the advantages of which both he and many other members were more than doubtful of a year ago. How the treatment effected the good results was still a mystery. The question of post-mercurial treatment was raised by Dr. Nolan, and Dr. Graham stated that he used no post-antisyphilitic treatment. Men treated by Dr. Graham had been able to resume work as masons and plumbers, and without disclosing their previous history of general paralysis had passed the authorities as most capable and healthy men.

The CHAIRMAN moved a vote of thanks to Dr. Leeper for his hospitality, to which Dr. Leeper replied.

#### PARLIAMENTARY NEWS.

#### ASYLUMS OFFICERS' SUPERANNUATION (AMENDMENT) BILL.

In the House of Commons on Tuesday, March 23, Mr. A. Taylor, M.P. (Lincoln), in moving: "That leave be given to introduce a Bill to amend the Asylums Officers' Superannuation Act, 1909," said that the need for the amendment of this Act was recognized by the House of Commons as far back as 1911, when it appointed a Committee to consider a Bill introduced by the noble Lord who is now Assistant Postmaster-General. (Hon. Members: "Agreed!")

Question put and agreed to.

The Bill ordered to be brought in by Mr. Taylor, Mr. Thomas Williams, Mr. Paling, Mr. Riley, Mr. Thomas Kennedy and Mr. Robert Richardson.

Asylums Officers' Superannuation (Amendment) Bill, "to amend the Asylums Officers' Superannuation Act, 1909," was presented accordingly, and read the first time.

On Wednesday, March 31, Mr. Taylor moved the second reading of the Bill, but as several hon. Members objected, it was automatically defeated.

The Asylums Officers' Superannuation (Amendment) Bill, therefore, is dead for the moment and cannot be re-introduced until the next session of the House.

#### THE MENTAL AFTER-CARE ASSOCIATION.

Annual Report, 1925.

Few who are familiar with the work of this Association can be in any doubt as to its value to the community, and the evidence of good and conscientious work is to be found in every page of this report, while evidence of its good management and administration was produced at the Annual Meeting by Sir Maurice Craig, the Treasurer, who drew attention to the fact that the expenses of administration

only accounted for 7% of the total expenditure (surely a record for any charitable body), while contributions from patients and their friends amounted to over 30% of the total receipts.

All who had the privilege of working with the late Dr. Henry Rayner will realize the loss his death has been to the Association, for as Sir Charles Wakefield (the President of the Association) truly said in his opening remarks at the Annual Meeting, he had during his life "with all his heart and mind and soul, given great and generous service to those to whom the Association was privileged to minister."

During the year as many as 1,431 cases (males 451, females 980) were dealt with, being an increase of 255 over the previous year, and the largest increase in any year, which appears to be conclusive evidence of the insistent demand for an organization of this kind fulfilling functions carried out by no other body.

The aims of the Association are set out as follows:

- r. To bridge over the difficult period following discharge from a mental hospital, to assist medical superintendents by visiting the homes of patients about to be discharged, and reporting to them on their condition, and also to keep in touch with those on trial with a view to reporting on their condition before final discharge.
- 2. To establish anew in each convalescent patient a degree of self-confidence, and to give them encouragement in the knowledge and assurance that they have in the personnel of the Association actual, sympathetic and personal friends, who are ready and anxious to stand by them and see them through their new difficulties.
- 3. To board them out in cottage homes so that they may have an interval of change of scene and air, during which period they can readjust themselves to their post-institutional conditions.
  - 4. To find them employment.
- 5. To give them grants in kind or money towards maintenance while seeking work, and provide them with necessaries such as clothing, glasses, dentures, etc., and tools if necessary when work is found.

It is satisfactory to note that a considerable number of mental hospitals and Boards of Guardians give financial support, but it is quite clear that if the benefits to the community, resulting from efficient after-care such as this Association provides, could be really brought home to these various bodies their number would be much greater; in this connection it is noted that a Propaganda Committee has been appointed, which will no doubt make this one of their aims.

New and active branches definitely affiliated to the main body are much needed to extend the work of the Association, especially as there appears to be a feeling in most areas that association of this work with that of the local mental deficiency workers tends to blur over a line which patients themselves and their friends recognize as a very definite one, and one upon which they are frequently very insistent; moreover the work is of an entirely different nature. It is satisfactory to note that a Conference for this very purpose was held in December, of committees and medical superintendents, which has resulted in the formation of new branches in several counties. The Council, in its report, records its very high appreciation of its officers, "who, even with the large numbers now passing through their hands, never appear to lose the valuable power they possess of individualizing each case; their power of intuitive understanding and sympathetic tact is one of the most important assets of the Association," and we feel sure that all who have experienced the services of this body will endorse this well-merited praise.

#### THE TRAINING OF MENTAL DEFICIENCY NURSES (1).

By H. FREIZE STEPHENS, M.R.C.S., L.R.C.P.,

Deputy Medical Superintendent, The Manor (L.C.C.) Certified Institution for Mental Defectives, Epsom, Surrey.

[Editor's Note.—As its author is in the service of the London County Council, it is necessary for us, in accordance with its regulations, to state that the L.C.C. is not in any way responsible for the opinions and conclusions expressed in his paper.]

<sup>(1)</sup> Reprinted from *The Nursing Times*, March 20, 1926, by kind permission of the Editor. This does not apply to the Appendix.—Eds.

In considering essentials in the training of the mental deficiency nurse it is important, first, to remember that she is concerned with the care of healthy as well as of sick defectives, with the needs of growing children, of nervous and often mentally unbalanced boys and girls, of cripples, of deaf and dumb and blind patients, of restless adolescents, of helpless inert idiots and low-grade imbeciles—of the whole world of varied types that go to make a training colony of mental defectives. Child study, the development of the mind in childhood and adolescence and the elements of mental hygiene are, therefore, important subjects in her syllabus of training.

But, though much of her work is not among the actively ill, it should not be forgotten that first and last and all the time she is a nurse. She represents the type of modern nurse, whose activities are concerned chiefly in the maintenance and improvement of bodily health, the hygienic educator, whose duties lie largely in the prevention of disease, in the detection of the early signs and symptoms of illness, rather than in the treatment of established disorders; nevertheless, she should know what to do, and how to do it, in the event of sickness, for she may not always enjoy the facilities of a colony hospital or clinic. She should, therefore, have a good grounding in anatomy and physiology, a thorough training in the principles of hygiene, in the fundamentals of medicine and surgery, and in the general principles of the theory and practice of nursing the sick.

#### Bed-side Nursing.

The General Nursing Council requires that six months of her training shall be spent in bed-side nursing in the hospital wards of the colony. I should like to see combined with this three months' training in the colony clinic, in the management and nursing treatment of minor ailments and of the little disorders of the eye and ear and skin so common in mental defectives. Training such as this is never wasted in any community; the time so spent is time well spent, and nine months is not too large a fraction of the training period of the probationer.

#### School Training.

Secondly, the mental deficiency nurse is concerned with the teaching of defectives, with the routine training of patients in matters of personal and domestic hygiene, with the training of nursery and school children, and with the vocational training of adolescents and adults. She should, therefore, become conversant with the general principles of modern education, with the physiological applications of these principles, and with the best methods of adapting them to the needs of mental defectives. Her quickest and easiest way to the attainment of this knowledge is through the colony school. Here she learns the essentials and fundamentals of the teaching of mental defectives; here she learns how to observe and study both the individual and the group and their inter-reactions; here, too, she learns how best to develop the defective's capacities for work and play. For the necessary practical instruction in these matters every probationer should spend not less than six months in the general routine duties of the school. The teacher-tutor is equally as important as the sister-tutor in the education of the probationer, and the training in the school is as essential as the training in the colony hospital for her full development-neither should be dispensed with nor neglected nor minimized in any way.

In addition to her six months' training in the school, every probationer should spend not less than six months, preferably in her third year, in the nursery department, or in the children's ward, or in the low-grade adult wards, so that she may gain practical experience in a senior capacity in the personal management and training of juveniles and low-grades in the daily routine of their lives. This, with her training in the school, should form a most important period in her probation, when, at the hands of experienced instructors, she should receive a thorough training in the essentials of her work as a mental deficiency nurse, as one who is not a custodian but an observant and stimulating educator of defectives.

#### Supervision.

Thirdly, the mental deficiency nurse is concerned with the supervision and control of adult defectives at work and in their hours of leisure. The trained supervisor is the product of years of experience. Although not enrolled by examination on the register of the Council, she is to be found in the older institutions

for mental defectives in this country, where she is a very valued and respected member of the staff, and where everybody acknowledges with pride that she is worth her full weight in gold! In the course of her three years of training the probationer may not hope to attain to the latter's width of practical wisdom, but she should learn in that time something of the general principles of supervision and control, and in her daily observant contact with patients on the playing-fields, in the day-rooms and villas, and in the various workrooms and workplaces of the colony should acquire those fundamentals in the management of adolescents and adults that are so essential in the kindly, sympathetic and successful treatment of defectives.

But, in addition to this general experience, at least six months of every probationer's training should be spent (preferably in her third year) in the personal management of a group of defectives in one of the departments of vocational training in the colony. This should be an essential phase of her pre-registration education, and it should not entail her being expected to acquire an expert, or even a technical, knowledge of that particular branch of vocational training in which she seeks to gain her experience in the management of mental defectives at work. Specialism should be undertaken always after registration; not at any time during her probation should the nurse be expected to train particularly for any special phase of colony activity other than that of a nurse; always the objectives of her training should be in the understanding of principles and in the development of faculties rather than in the acquirement of technical knowledge in any particular trade or industry.

A probationer may be, prior to her probation, a skilled craftsman in some particular industry; after registration she would be doubly qualified both as a nurse and as a craftsman, and, correspondingly, would be useful to the colony in which she worked; but her special training as a craftsman should not exempt her from fulfilling any part of her special training as a nurse. Similarly, in the course of her training, a probationer may show special aptitude for, say, school teaching; this would be a particular asset in her favour after registration should she wish to specialize in this subject, but it should not excuse her from dispensing with any part of her training, e.g., bed-side nursing, should she wish to qualify as a mental deficiency nurse. In either case, the adoption of such an exemption policy would be as devastating, as, say, allowing a midwife to submit her special training in midwifery in lieu of general surgical training for her final examination for the Council's certificate in general nursing.

The training of a mental deficiency nurse is a composite training, but it requires the acquirement of certain essentials by every mental deficiency nurse; to dispense with any particular part of it in the case of any particular probationer is to make a travesty of that training; it is to destroy the ideal of a definite entity, and in practice it will result in introducing into a colony a number of warring sections—sick nurses, school nurses, industrial nurses, farm nurses, domestic nurses, games nurses, eurhythmic nurses and—who can tell?—numberless other grades, all trained along their own lines, each believing her own speciality to contain the secret of the salvation of the defective, each despising the other, each suspicious of the other, all antagonistic to all—a prospect not too pleasing to contemplate.

There should be only one type of registered mental deficiency nurse, trained along comprehensive lines; and every registered mental deficiency nurse should be trained along those lines. The essentials herein noted are submitted as the essentials of her training, and it is to be hoped that as the result of the deliberations at their second meeting the conference will be able to give them due value and weight.

APPENDIX (1).

SUGGESTIONS FOR AN EXAMINATION SYLLABUS AND A SCHEDULE OF PRACTICAL INSTRUCTION FOR MENTAL DEFICIENCY NURSES.

[An Abstract.]

I. INTRODUCTORY NOTE.

The current syllabus issued by the General Nursing Council for its examinations for mental deficiency nurses is the Revised Syllabus of the Royal Medico-

LXXII.

<sup>(1)</sup> A complete copy of this scheme can be obtained on application to the author.

—Eps.

Psychological Association, and is known as "The Syllabus of Subjects for Examination of Mental Nurses and those Nursing Mental Defectives." It was first published by the Council in 1923 and revised in 1925.

This syllabus consists of thirteen sections, of which the first twelve were originally prepared for mental nurses and the thirteenth section subsequently added for mental deficiency nurses. It may, therefore, be called the "Mental Nurses' Syllabus," and is referred to as such in these pages.

Of the thirteen sections of this syllabus, mental nurses are examined to-day in the subjects of the first twelve, and mental deficiency nurses in ten, namely,

Sections I-VIII, and Sections XII and XIII.

The Examination Syllabus and Schedule of Practical Instruction suggested in these pages is based on the models published in the "Mental Nurses' Syllabus," but differ from these in several ways. These differences are indicated in the text, and chiefly arise from the fact that the suggested models have been prepared primarily for mental deficiency nurses.

#### 2. SUGGESTED EXAMINATION SYLLABUS.

[The following Syllabus differs from the "Mental Nurses' Syllabus," 1923, revised 1925, in three main directions:

- (a) The number of the Sections has been reduced from ten to seven, and these latter contain two new Sections on Child Study (Section IV) and Mental Hygiene (Section VI).
- (b) The Sections have been rearranged so that Sections II, IV and V, Parts I and 2 of the "Mental Nurses' Syllabus" become Sections I, II and III, Parts I and 2 of the suggested Syllabus. As these Sections contain the subjects of the Preliminary Examination (except Section III, Part 2), they are correctly placed first in the Syllabus, and this necessary alteration brings the suggested Syllabus into line with the Examination Syllabuses issued by the General Nursing Council in other branches of Nursing.
- (c) Some of the original Sections have disappeared as separate sections, and others have been modified for the new Syllabus. Thus Sections I, III and XII of the "Mental Nurses' Syllabus" do not appear as separate sections, but are embodied in Section III, Parts 3 and 4 of the Syllabus suggested herein. Similarly, Sections VII and VIII of the former Syllabus disappear as separate Sections, and become embodied in Section VI of the latter Syllabus. Finally, Sections VI and XIII of the older Syllabus have been altered and reappear as Sections V and VII respectively of the new Syllabus.]

#### EXAMINATION SYLLABUS.

#### I. Elementary Anatomy and Physiology.

(This is exactly similar to Section II of the "Mental Nurses' Syllabus," published 1923, revised 1925.

It also corresponds to Section I in all the other Syllabuses issued by the General Nursing Council.)

#### II. Hygiene.

(This is exactly similar to Section IV of the "Mental Nurses' Syllabus," 1923, revised 1925.

It also corresponds to Section II in all the other Syllabuses issued by the Council.)

#### III. Theory and Practice of Nursing.

#### Part 1.

(This is exactly similar to Section V, Part 1, of the "Mental Nurses' Syllabus," 1923, revised 1925.

It also corresponds to Section III, Part 1, in all the other Syllabuses issued by the Council.)

#### Part 2

(This is exactly similar to Section V, Part 2, of the "Mental Nurses' Syllabus," 1923, revised 1925.)

#### Part 3.

Supervision and Control of Mental Defectives. Methods for the Individual. Group Methods. Objects of the Group. Value of Environment. The Nurse as a Factor in Environment. Relation of Nurse to Defective. Characteristics of the Good Nurse. The Nurse as Teacher. The Nurse as Counsellor and Friend. Patients' Confidences. The Nurse and Fair Play. General Responsibilities. Personal Responsibilities. Special Responsibilities. Discipline. Rewards and Penalties. General Duties. Special Duties. Laws and Rules for the Protection of Patients. Absence with Leave. Supervision and Control in Hostels.

#### Part 4.

Care and Training of Mental Defectives.
General Considerations.
Special Considerations.
Environmental Conditions.
General Methods.
Special Methods.
Care, Management and Training of Epileptics.
Estimation of Progress.
Reception of New Cases.
Management of Bodily Health.
First Aid in Emergencies.
Removal and Transfer of atients.

IV. Child Study.

General Considerations.
Food and Feeding.
Care of Infants.
The Nursery Child.
The School Child.
Adolescents.
The Naughty Child.
Child Mortality.

V. Elementary, Medical and Surgical Nursing.
VI. Elementary Mental Hygiene and Nursing.

VII. Mental Deficiency Nursing.

Nature of Mental Deficiency.
Characteristics of Mental Defectives.
Causal Factors and Pathology. Mental Measurement.
Legal Definitions.
Social Types.
Clinical Varieties.
Physically Defective Aments.
Epileptic Conditions in Mental Defectives.
Common Neuroses in Mental Defectives.
Mental Disorders in Aments.
Relations of Mental Deficiency and Insanity.

Malingering in Mental Defectives.

Criminal Defectives.

General Principles of Treatment and Training.

Care of "Cot" Cases.

Routine Training of Children and Adults in Matters of Personal and Domestic Hygiene.

Sense, Speech and Scholastic Training.

Vocational Training.

Physical and Rhythmic Training.

Games.

Baden-Powell's Methods.

Moral and Social Training.

Legal and Social Aspects of Work for Mental Defectives.

A suggested Schedule of Practical Instruction follows.

#### OBITUARY.(1)

#### THE LATE SIR FREDERICK MOTT, K.B.E., F.R.S.

LADY MOTT and her daughters are most grateful for the generous messages of sympathy which they have received from their many friends. They treasure these expressions of love and devotion to Sir Frederick, and are much consoled in the loss of a beloved husband and father by the knowledge that his life-work was so greatly appreciated by his colleagues.

#### DONALD FRASER, M.D., F.R.F.P.&S.Glas.,

Consultant Physician to the Riccartsbar Mental Hospital and the Royal Alexandra Infirmary, Paisley. Ordinary Member since 1881.

In the death, on May 19, of Dr. Donald Fraser, at the age of 85, the Association has lost one of its oldest members, he having joined in the year 1881. Dr. Fraser graduated M.B. in 1867 and M.D. in 1870 at Glasgow University, where he was a student under Lister. His interest in mental diseases began as early as 1866, when he acted as clinical assistant to Dr. (later Professor) McIntosh, at Perth District Asylum, Murthly. Subsequently he built up a large practice during the course of fifty years in the town of Paisley and was Visiting Physician to the Paisley Mental Hospital at Riccartsbar, where he attended daily, and latterly as Consultant Physician he had visited regularly to within a few days of his illness. He retired from general practice twenty-three years ago—to reside in Glasgow as a consultant in mental and nervous diseases.

In 1875 Dr. Fraser became a Fellow of the Royal Faculty of Physicians and Surgeons (Glasgow) and was also an examiner in medicine in Glasgow University. Since 1885 he had been a member of the staff of the Royal Alexandra Infirmary, Paisley, being Honorary Consultant Physician at the time of his death. He was interested in epidemiology, and took a very active part in the campaign against consumption. Among his published writings are "Spanish Asylums" (1878), "A Sketch of the Care and Treatment of the Insane in Paisley" (1896), "Hysteria as a Psychosis" (1897), being his Presidential Address to the Glasgow Pathological and Clinical Society in that year, and "Aphasia" and "Porencephaly"—all contributed to the Glasgow Medical Journal. It is said of him that "as a physician he was trusted and beloved by rich and poor alike, on whom he expended his sympathy and skill without distinction." Another writer ascribes to him "a rich personality whose activities covered a wide field in medicine, in politics, in literature, in art and music, in agriculture and country life, in philosophy, theology and sociology."

His wife, who predeceased him fifteen years ago, was a sister of Prof. Joseph Coats, and he leaves five daughters—one being Dr. Kate Fraser, a Deputy-Commissioner of the General Board of Control for Scotland.

<sup>(1)</sup> An obituary notice and photograph of the late Il Senatore Camillo Golgi has been postponed until January, 1927.

# RICHARD JOHN LEGGE, M.D.R.U.I., L.R.C.S.Edin. Ordinary Member since 1883.

Though his life in Cheltenham during the past eleven years had been one of quiet retirement, Dr. Richard John Legge, who passed away on March 8, 1926, at 8, Bath Place, aged 72, was held in much respect and esteem. He was the President of the Photographic Society, a member of the Chess Club, and formerly, for a time, was associated with the Natural Science Society. A native of Clonmel, he was educated at Cork, Trinity College, Dublin, and in London; and passed with distinction both in medicine and surgery. After experience as a ship's doctor in a large Italian sailing vessel-a post taken mainly for the benefit of his health -he purchased a practice at Wadhurst, Sussex. The life of a general practitioner was not to his liking, and he obtained a post as assistant at the Inverness Asylum. Afterwards he was Medical Officer at the Wye House Private Asylum, Buxton, whence he went to the Derby County Asylum as Assistant Medical Superintendent. Eventually he was appointed to the major position, and for 16 years had full charge of the institution. On his retirement he came to Cheltenham for the education of his son and daughter at the respective colleges. His remains were laid to rest in Cheltenham Cemetery on Wednesday, the mourners being the widow-who before her marriage was Miss Helen Burton, of Cupar, Fife, N.B.—the son, Mr. Richard Burton Legge, O.C., and the daughter, Mrs. Enstone. The Rev. C. Cossens Petch, (Vicar of St. Luke's) officiated. Dr. Soutar attended as a representative of the Royal Medico-Psychological Association, of which the deceased was for many years a member; and in addition to those from the immediate friends, there were wreaths from the Photographic Society, the Chess Club and the Derby County Asylum.—(From the Echo, Cheltenham, March 15, 1926.)

#### WILLIAM DAVID MOORE, M.D., M.Ch., R.U.I.,

Medical Superintendent, Holloway Sanatorium, Virginia Water, Surrey. Ordinary Member since 1899.

On January 30 of this year Dr. William David Moore, a man of great charm, of strong personality, of remarkable versatility, and endowed with business capabilities which made him an ideal Superintendent of one of the largest registered hospitals in England, died on the eve of his retirement after thirty-four years of most successful service. He was giving advice to his Committee on the choice of his successor when he succumbed to an apoplexy.

Dr. Moore was the son of the Rev. John Hamilton Moore, D.D., of Belfast, and was born in 1858. He was educated at the Royal Academical Institution, Belfast, and at the Queen's Colleges of Belfast and Galway and at the London Hospital. He qualified in medicine in 1880, and after some experience of private practice he became Assistant Medical Officer, and ultimately Senior Assistant Medical Officer at the Wilts County Asylum, Devizes. After another short period of private practice at Alresford, he again took up mental work on his appointment to the post of Senior Medical Officer at the Holloway Sanatorium, Virginia Water. On the retirement of the Medical Superintendent of that institution in 1899 Dr. Moore was appointed to succeed him.

Dr. Moore's strength of character, logical mind, common sense and his abounding sympathy with patients and staff found full scope at the Holloway Sanatorium. He was responsible for many structural improvements at that hospital. The Chapel was artistically decorated, and a new organ provided. New quarters were erected for the Nursing Staff. A male hospital with facilities for open-air treatment was erected, and cottages for the married attendants were built on his recommendation. Not content with the erection of handsome structures and comfortable and hygienic hospital wards, he took every pains in building up a fine staff of nurses by careful selection and long-continued training.

He was one of the first physicians to appreciate the possibilities of the modern mental hospital for the treatment of incipient and curable mental diseases, as distinct from the old-fashioned asylum which was often merely a home for incurables, and he initiated and carried out numerous additions and improvements which have brought his hospital to rank as a modern institution for mental invalids,

Dr. Moore was a great believer in occupation-therapy, and for many years he

organized an exhibition of arts and crafts at the Holloway Sanatorium. The result of his patients' industries was exhibited each year, and filled the whole of the large recreation hall of that institution.

One of the highest honours conferred on a Roman emperor was the title Pater Patriæ. Dr. Moore was indeed a father to his hospital, to his patients, and to his staff. I have known several of his patients, and without exaggeration I can say they all loved him. They admired his strength of character, his sound advice, his broadminded judgment, his unselfishness, his infectious sense of humour, and his never-failing sympathy.

One of his colleagues writes: "The secret of his influence with patients and with many others who sought his help and advice lay, not in his many accomplishments, but in his sympathy, tact and patience, and a wide charity which looked for the best qualities in all. His memory will long be kept green, and his best monument is in the hearts of his patients and fellow-workers."

One of Dr. Moore's patients, on hearing of his death, wrote as follows:

- ". . . But have you ever met the man who, when everything and everybody appears drab and murky, when you seem to be breathing an atmosphere of almost inky blackness, when the whole world seems to have deserted you—have you then, I ask, met the man who has come across your path and instinctively said the right thing?
- "Can you say you have met the man who has treated you then as an ordinary normal being and asked you, 'Have you heard the latest?' and having heard it, have you not followed in the wake of that instinctive action and gone and repeated it to someone else, with the natural result that you both find yourselves in roars of laughter, and the demon of self-consciousness, for a time at any rate, chivied off the map?
  - "What! You have met that type of fellow? Well, you surprise me!
- "But look here, and this is where the RUB comes in. Have you ever come across the man whose innate good-fellowship and 'bon camaraderie' have distilled their healing influence wherever he has gone, whose straightforwardness and practical sympathy have won for him the admiration of all?
  - "You have? Again you surprise me beyond measure.
  - "Only bear with me a moment longer.
- "Have you ever met the man whose sporting instincts have led him to play a first-class innings from start to finish, to whom the very suspicion of 'cheese-paring' or unfairness was the veriest poison? You have? Well then we must be thinking of the same man. The work of D1. Moore is not finished; it will live on and speak for him if only those who are left behind will have it so. Carry on and take your share of what has already proved a most fruitful innings. And who knows but that, when your time comes to pass over the border, you will be greeted by your old friend with 'Well done—have you heard the latest?'"
- Dr. Moore's versatility was remarkable. In his younger days he was noted for his great physical strength. He had an excellent record as an athlete. He played for Ireland in the Rugby International Football matches in 1878, 1879 and 1880. He played cricket for the Wiltshire County Cricket Eleven. He was in the semifinals for the Amateur Golf Championship. He was a good oar, a fine skater, and a champion long-distance swimmer. He had a passion for music, and he possessed a good tenor voice. He had uncommon skill as an artist, and literary gifts in verse and prose much above the ordinary.
- Dr. Moore married in 1888 Mary Louisa, daughter of William McKeown, Esq., of Belfast, who predeceased him in 1917.
- Dr. Moore's death will be acutely felt by his devoted patients and his loyal staff, but he will be missed also by the physicians of sister institutions, who valued so much his friendship, his delightful badinage, and his wise counsel. Physicians of other mental hospitals constantly applied to him for advice and help in the many difficult problems which have arisen during the past twenty years in mental hospital administration. Dr. Moore was never appealed to in vain. In the most unselfish way he would work at their problems as if they were his own, and give ungrudgingly to his friends the best and fullest advice from his ripe experience.

D. RAMBAUT.

#### J. E. P. SHERA, M.D., L.R.C.P., L.R.C.S.Irel.,

Medical Superintendent, County Mental Hospital, Wells, Somerset.
Ordinary Member since 1900.

Nestling at the foot of the Mendips, in Somerset, is the cathedral city of Wells, one of the beauty spots of England.

On the eastern outskirts of the city, surrounded by a high stone wall, lives a community of 800 sufferers from all kinds of mental disability. Here, housed in an architecturally interesting domestic Tudor building, mostly built by Gilbert Scott, and situated in beautifully laid-out grounds, are the patients of Eastern Somerset and the City of Bath.

For twenty-one years John Edgar Percival Shera lived among these folk, first as Senior Medical Officer and for the last seven as Medical Superintendent. On March 24, 1926, he met his end with the calm courage which questions nothing and complains of nothing.

He was born at Coothill, co. Cavan, on April 16, 1873, and received his medical education at Trinity College and the Royal College of Surgeons, Dublin, qualifying L.R.C.P.&S. Ireland in 1895. In 1903 he took the degree of M.D.Brux. He was house physician for a year at the Richmond Hospital, Dublin, and afterwards went to sea for a year. For eighteen months he was in general practice in London, but gave this up "as he had not the heart to charge poor people."

His first mental appointment was that of Assistant Medical Officer to the Norfolk County Mental Hospital, where he stayed from July, 1899, to December, 1900. From December, 1900, to April, 1905, he was Assistant Medical Officer at the Kent Mental Hospital, Charthamdown. In April, 1905, he became Senior Assistant Medical Officer of Wells Mental Hospital, where, with the exception of his war service, he lived till his death.

His war service was: R.A.M.C., Salonica, December 11, 1916, to September 6, 1918; Murmansk (Russia), November 17, 1918, to August 1, 1919.

The above is the plain record of a man whose dominant characteristic was his sense of duty. The writer knew him intimately for fifteen years, and does not remember a man so dependable, loyal, uncomplaining and methodical among those who were his colleagues for 28 years of official life. His regularity, steadiness of habits, moderation in all things, coupled with a certain dignified silence, made him respected by all who had any relations with him. His high example and devotion to duty made him a very valuable officer—" men might come, and men might go," but Shera could always be relied on.

His various duties were always well and punctually attended to. This in spite of periodic ill-health, for he developed gastric trouble some years ago, but operative measures seemed to give him ease and relief, in so much that during the extremes of climate from Salonica to Russia he never was a day off duty from illness. In 1924 he again had grave symptoms and underwent a second operation, but seems steadily to have grown worse.

He was a strict disciplinarian, but ruled by the strength of his fine example. At Wells his loss will be keenly felt. In a community dependent on one another more than in the outside world, he had shared their joys and sorrows for so many years that his name will for long be on their lips, and deservedly.

Shera was fortunate in having a committee at Wells of kindly, understanding gentlemen, who gave him their complete confidence and respect. As far as possible everything in the way of rest and holiday was granted him, and he was greatly touched by their kindness.

He was, like most Irishmen, a lover of animals and sport. He played cricket, and was an obstinate, straight bat. At golf his handicap was round about 10, and he drove a very long ball and played a good deal.

He has passed away at a comparatively early age—he was only 53. He married in August, 1920, Lillie, elder daughter of Major Stephen Neary, of the Essex Regiment, who survives him. His mother also is still living. To them both our sincere sympathy is extended.

A North of Ireland man, he was, as one would expect, intensely loyal to his King and his Country, and he chafed greatly that he was not liberated earlier to join up in the Great War.

Practically his whole professional life was spent in the service of the suffering and afflicted poor, and on behalf of them the writer is glad to pay this imperfect tribute to his memory, and to express his deep regret at his untimely death.

G. S. P. (Norwich) -

JOHN CUSTANCE SHAW, M.R.C.S.Eng., L.R C.P.Lond., Medical Superintendent, West Ham Mental Hospital.

#### Ordinary Member since 1917.

It is with deep regret that we have to record the death, on May 3, From pneumonia, after a fortnight's illness, of Dr. John Custance Shaw, the Meclical Superintendent of the West Ham Mental Hospital, at the age of 59 years.

Dr. Shaw hailed from Yorkshire and was educated at Richmond Grama what School, afterwards qualifying for the medical profession from Bart.'s Hospital. For about six years he was Assistant Medical Officer at the Hull City Mexital Hospital. Then, after a short period of private practice, and some service in South Africa during the war of 1900-01, he re-entered psychiatry at West Ham, where he was promoted to be Medical Superintendent in 1916.

He was noted for his great kindness to the patients and staff, with all of we know

he was deservedly popular.

#### THE ULSTER MEDICAL SOCIETY

Dr. M. J. NOLAN has been elected President of the above Society for the coming year.

#### NOTICES OF MEETINGS.

Annual General Meeting.—July 12-16, 1926, in London.

South-Western Division.—October 28, 1926, at the Hereford City and County Mental Hospital.

# THE INTERNATIONAL JOURNAL OF PSYCHO-ANALYSIS

Directed by SIGM. FREUD

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# THE JOURNAL

OF

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# MENTAL SCIENCE.

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#### THE ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION.

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#### "THE CLINICAL STUDY OF MENTAL DISORDERS."

By LT.-COLONEL J. R. LORD, C.B.E., M.B., M.R.C.P.Edin.

Being the Presidential Address for 1926.

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M.A.B.

The Retreat.

Barnwood House. Aberdeen City.

Birmingham City.

Wilts.

Also the following Reports, Reprints, etc. :

The Royal Eastern Counties' Institution, Colchester, 1925.

Rassegna di Studi Psichiat: Omaggio Italiano à J. M. Charcot.

Les Fondements, les limites et la valeur de la Psychologie Scientifique, par Prof. Alberto Mochi.

Arb. aus der Deutsch. Forschungs für Psychiat. in Münch., April, 1926. Psychology really Simplified, by the Rev. S. Claude Tickell.

Science and Ultimate Truth, by the Very Rev. W. R. Inge, C.V.O., D.D.

L' "Afrodeimia," by Dott. A. R. Sanguincti.

L.C.C. Education Committee: Juvenile Delinquency in London. Mental Hospitals in Burma: Report for 1925.

Report of the Friends Hospital, Philadelphia, for 1926.

Das Christentum, by Dr. J. Bresler.

Su una varieta insolita di afasia, by Prof. Leonardo Bianchi.

Contributo alla conoscenza del processo percettivo, by Prof. Leonardo

L'Aire corticale de la lecture, by Prof. Leonardo Bianchi.

#### Books received for review:

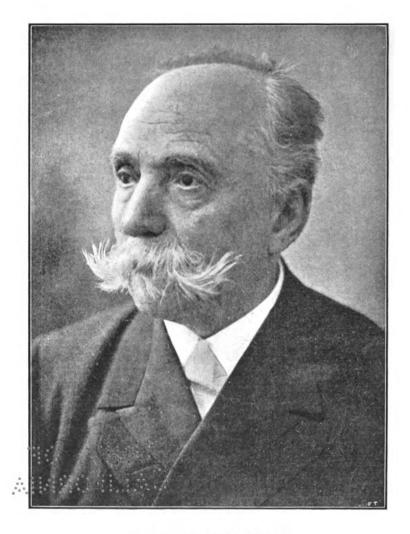
J. Hughlings Jackson: Eine Studie Über Krämpfe, 1869, by Von Otto Sittig.

Psychological Monographs, No. IX and No. X, edited by C. E. Seashore. Aphasia and Kindred Disorders of Speech, by Dr. Henry Head.

Psychological Medicine, by Sir Maurice Craig and Dr. Thomas Beaton.

An Outline of Abnormal Psychology, by Prof. William McDougall, F.R.S.

#### JOURNAL OF MENTAL SCIENCE, OCTOBER, 1926.



IL SENATORE CAMILLO GOLGI.

Born July 9, 1843.

Died January 29, 1926.

#### THE

### JOURNAL OF MENTAL SCIENCE

[Published by Authority of the Royal Medico-Psychological Association.]

No. 299 [NEW SERIES] OCTOBER, 1926. VOL. LXXII.

#### IL SENATORE CAMILLO GOLGI.

CAMILLO GOLGI was born of humble parentage at Corteno (Valcamonica) on July 9, 1843, and died at Pavia on January 21, 1926. At 22 years of age he completed his medical studies in the University of Pavia, and subsequently acted as Assistant in various cliniques of the Faculty of Medicine there. He was most assiduous in his attendance at the Laboratory of Experimental Pathology, at that time under the direction of Bizzozero, the discoverer of the blood-plates. He had, for financial reasons, to leave Pavia for a time and take charge of a hospital for chronic patients, but he allowed no difficulties to discourage him, and, even in apparently uncongenial surroundings, carried on his researches. In 1873 he discovered the famous Black Reaction, which, in the practice of histology, has since borne the name of the "reaction of Golgi."

This reaction consisted in treating sections of the central nervous system with silver salts, and gave results so clear and so picturesque as to constitute a triumph in histology. It spurred the hope that by similar means equal success would be obtained in elucidating the histology of other organs of the body.

The silver methods of Golgi revealed the entity of the nerve-cell, its body, its processes and connections with other nerve units, and led Ramon-y-Cajal to his fruitful work on the contiguity of the nerve-cells and to his theory of dynamic polarization.

His discovery in 1880 of the nerve-ending in the musculotendinous zone, that delicate nervous mechanism since known as the "organ of Golgi," was another event of far-reaching importance. It cleared up, partially at least, the hitherto dark question of musculo-tendon sensation. By means of the organs of Golgi we are informed of the tension of our muscles, just as the dynamometer inserted on the trajectory of a rope can demonstrate the force sustained by the rope.

LXXII. 32

It must not be forgotten that it was not only in the realm of neuro-histology that Golgi was conspicuous; his researches on malaria were of extreme importance. In 1886 after he had returned to Pavia he noticed that cases of malaria were particularly numerous among the workers who cleaned rice—there being extensive rice-fields at no great distance from the city. His investigations on the blood of sufferers from malaria showed that in correspondence with the diverse phases of the acute attack there were changes in the malarial parasite, and that its evolution was intimately related to the varied rhythm of the fevers (quotidian, tertian, etc.).

Golgi attained the zenith of his fame in 1907 when, as the writer in La Lettura puts it, he had now reached the threshold of the Immortals. He was awarded the Nobel Prize at the same time as his friend Giosué Carducci, the great poet of the Risorgimento.

Previously Golgi had received the Thompson Prize from Boston and the Reinecker award of Würzburg. He had been created an honorary graduate of the Universities of Cambridge and Paris.

Though full of years and honours he carried out his research work to the end. His was a universal genius, humane in spirit, exalted in aim and character, and his passing in his 84th year was "Non flebile quid, sed triumphale."

H. C. M.

#### Part I.—Original Articles.

#### THE SEVENTH MAUDSLEY LECTURE.

THE PREVENTION OF INSANITY—A PRELIMINARY SURVEY OF THE PROBLEM.

Delivered by GEORGE M. ROBERTSON, M.D.,

PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS, EDINBURGH; PROFESSOR OF PSYCHIATRY, UNIVERSITY OF EDINBURGH; AND PHYSICIAN, ROYAL HOSPITAL, MORNINGSIDE, EDINBURGH;

At the Annual Meeting of the Royal Medico-Psychological Association, held in the Great Hall of the British Medical Association House, London, on Thursday, July 15, 1926.

#### INTRODUCTION.

My first duty is to express my thanks to the members of the Royal Medico-Psychological Association for the great honour they have conferred on me in asking me to deliver the Maudsley Lecture.

Sir Frederick Mott, whose recent loss we all deplore, was good enough to suggest that as I had made some practical experiments in the early treatment of mental disorders, I should lecture on that subject. I endeavoured to frame a lecture on the lines he suggested, but, as I proceeded, my thoughts on early treatment turned to an earlier and a still earlier stage of disease, then to the causes of mental illness, till finally I found myself contemplating, not the early treatment, but the prevention of insanity.

As it is not possible in the course of one lecture to cover the whole of this field of preventive medicine, I have limited my purview to a preliminary survey only of the problem.

The subject divides itself naturally into two parts. The first deals with those influences which go to the causation of insanity, a knowledge of which is a preliminary step to the solution of the problem. The second part deals with the theories and methods of prevention, in which the prevention of general paralysis of the insane is considered in some detail.

The statistics on which I have based most of my diagrams have been taken from the Twenty-first Annual Report of the Commission in Lunacy of the State of New York, dealing with a population of nearly 9,000,000 persons. These supply the unusual feature of recording the number of the insane at quinquennial age-periods in relation to the persons living at these age-periods. No statistics relating to these matters can be expected to be entirely free from error, but even though they be only approximately correct, valuable deductions can be safely made from them, if we avoid the pretence of exactitude.

Finally it is the desire of the Association that this lecture should be of a non-technical character, in order that it may be found of help to the general public.

#### PART I.

# INFLUENCES AFFECTING THE CAUSATION OF INSANITY.

#### THE OCCURRENCE OF INSANITY.

The first chart deals with the occurrence of insanity and records the total admissions to the State mental hospitals in quinquennial age-periods, and only first admissions have been made use of. The exclusion of readmissions avoids many sources of error, as these are often a continuation only of the original attacks of insanity.

Insanity occurring under the age of 15 is quite negligible. This is not an insanity-producing period of life, and if included in statistics of insanity it has a most disturbing effect, as it comprises nearly a third of the population. If, for example, there is a high birth-rate and a low infant mortality this will increase the population at this period, and the effect of this proportionate

increase will be to reduce the apparent amount of insanity in the total population, without any real diminution of insanity.

A fair number of admissions occur between 15 and 19, and a larger number between 20 and 24. The amount continues very high up to 40 years of age, after which it falls.

This chart appears to confirm the general impression gained by experience that the early years of life are the most liable to insanity, and that as one grows older, the occurrence of a mental breakdown becomes every year more remote.

450 300 150 Under 15 20 25 30 35 40 45 50 55 60 65 70 75 80

24

34

39

Total Number of First Admissions (5,222) in Quinquennial Age-Periods.

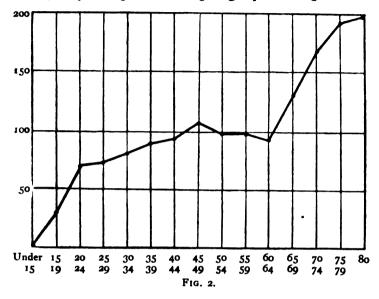
There is, however, an error lurking in these superficial views. While these statistics truly represent the number of cases of insanity occurring at the different ages, they do not represent the rate of incidence or the liability to insanity—that is to say, the frequency with which insanity occurs in proportion to the number living at the different ages. The large number of admissions recorded between the ages of 20 and 40 is mainly due to the greater number of young persons in the community, and the small number of admissions at 75 is due to the small number alive at that age.

49 54

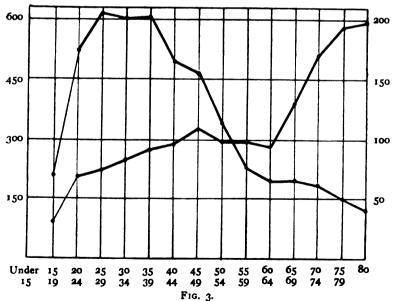
#### THE RATE OF INCIDENCE OF INSANITY.

The next chart (Fig. 2) is of more value, as it gives the number of cases of insanity occurring at the different ages, in proportion to the number of persons living at these ages.

Rate of Incidence of Insanity (calculated on First Admissions) per 100,000 of the Population Living at Quinquennial Age-Periods.



Graph of Total Number of First Admissions (5,222) compared with Rate of Incidence of Insanity per 100,000 of the Population at Quinquennial Age-Periods (Ratio 3 to 1).



The tendency to develop insanity first shows itself between 15 and 19, but it becomes much more pronounced between 20 and 24. This is followed by a steady rise year after year till the age of 50 is reached. There is then a short period of decline, after which an an extremely rapid rise occurs in old age.

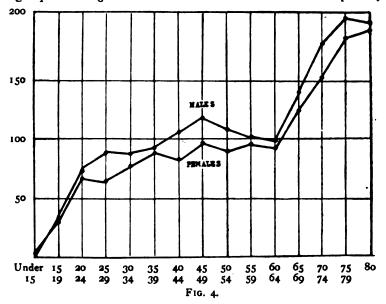
This chart (Fig. 3) shows us that insanity begins to appear at pubescence and adolescence, but it also indicates, contrary to the impression given by the first chart, that adolescence and early adult life are not the periods when one is most liable to become insane. Quite the reverse is the case. There is less insanity at adolescence than at any subsequent period of life, and there is a general tendency for insanity to become more frequent as one grows older.

# COMPARISON OF THE OCCURRENCE WITH THE RATE OF INCIDENCE OF INSANITY.

The difference between the number of cases of insanity occurring at the various age-periods and the rate of incidence of insanity at these periods is so very important, and is so inadequately realized even by experienced clinicians, that the two charts have been brought together for the purpose of comparison. It is scarcely possible to imagine two graphs more opposed.

#### INCIDENCE OF INSANITY AMONG MALES AND FEMALES.

Rate of Incidence of Insanity per 100,000 of the Population Living at Quinquennial Age-Periods. Male and Female Admissions Separately.



The influence of sex, according to the chart (Fig. 4), indicates that the rate of insanity occurring among males is proportionately higher than it is among females. This is a somewhat unexpected result, as women are more emotional and excitable than men. It is mainly due, according to these statistics, to the greater number of admissions from general paralysis and alcoholic insanity among males.

# THE INCIDENCE OF INSANITY AMONG THE MARRIED, WIDOWED AND SINGLE.

The incidence of insanity among the married is decidedly low. It is slightly higher among women under 35 than among men, which is contrary to the general rule, and this is no doubt connected with the risks of child-bearing.

Insanity in Relation to Marriage. Ratio per 10,000 of Population of same Sex, Age and Condition as to Marriage of Yearly Average Number of Patients Admitted into Institutions in England and Wales from 1898-1902 inclusive, divided into Married, Widowed and Single, Males and Females.

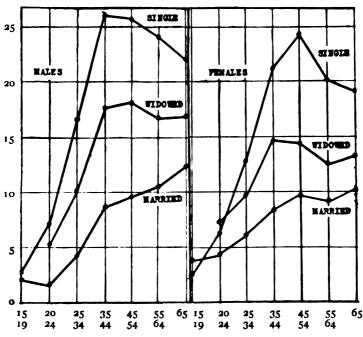
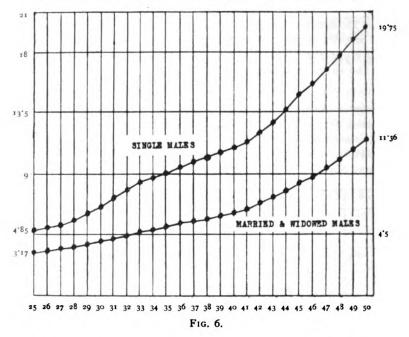


Fig. 5.

Then as regards widows and widowers, it is found that the loss of a husband or a wife increases in a marked manner the incidence of insanity. Up to the age of 55 the prevalence of insanity among widows and widowers is almost double that among married men and women.

Comparative Annual Death-rate from 25 to 50 Years of Age of Males Divided into Two Groups: (a) Single; (b) Married and Widowed. (Scotland, 1920–21–22. By courtesy of Registrar-General.)



These two groups of persons, the married and the widowed (Fig. 6), are identical in all respects except in those consequences which result from the loss of a husband or a wife. These are numerous and important, and the decided effect they produce is not surprising. The symptoms of insanity are to a large extent a wrong method of adjustment to difficulties in life, and the increased amount of insanity among widows and widowers is both a sociological and a biological phenomenon.

Lastly, the prevalence of insanity among single men and women is decidedly high. Between the ages of 25 and 55 it is nearly three times as great as among a similar number of married men and women of the same age.

The causes of this difference are more involved than those between the widowed and the married. The two latter groups are identical, except as regards their married state, but there are many other important differences between the single and the married. There has been a process of selection among the married, who may be regarded as a picked lot. Both husband and wife have at least selected one another from all others, and on the whole, for good reasons. The average health of the single, on the other hand, is probably lower than that of the married, for ill-health may be itself a reason for remaining single. According to Dr. Dunlop, the Registrar-General for Scotland, the expectation of life for a married man 25 years of age is nearly 5 years more than for a bachelor of the same age.

The cynic has said that the lives of married men are not really longer than those of the single: "They only seem longer." But from actual statistics it would appear that married men score off bachelors in both senses.

One may conclude from the very low incidence of insanity among the married that the condition of marriage and of family life, in spite of its greater responsibilities, nay, perhaps on account of them, is the most favourable mode of existence for men and women. We all know the advice given by a distinguished personage to "Those about to marry." With all deference I submit that this advice was probably wrong. Men between 25 and 35 years of age remaining bachelors die on the average 4 years sooner than married men, and run three times the risk of becoming insane.

#### THE THREE CRISES OF LIFE.

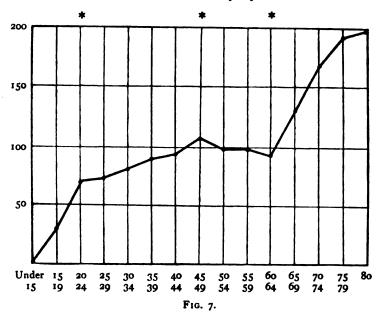
There are certain critical periods in life when constitutional changes having far-reaching consequences, both mental and physical, take place, and all these crises, of which three are recognized, seem connected in some measure with the function of sex.

At adolescence the balance of the internal secretions of the body is disturbed by the intrusion of those from the sexual glands, and during this transitional period of chemical, physiological and psychological adjustment, nervous instability may be present. For all practical purposes, insanity occurs for the first time during this period of life.

Leaving on one side the effect of heredity, which will be referred to later, insanity is seldom due to one cause, but is usually the result of the combination of several causes acting simultaneously. There is almost always a physical cause present, but it is usually combined with mental causes as well. The physical cause in adolescent insanity is the physiological disturbance produced by the internal

secretions. The mental cause is the change in the social status of the adolescent or young adult. He is emerging from a state of pupilage and of protection to face the world. He has to adjust himself to the problems of life, and the most disturbing problems during these early years are those connected with sex. It is not surprising that a disappointment in love may help to produce mental disorder during this crisis.

Rate of Incidence of Insanity per 100,000 of the Population, indicating the Three Crises of Life.



The next crisis is the climacteric, occurring between 45 and 50. The existence of this crisis in the lives of women has always been recognized, but nervous changes of an analogous character probably occur about the same time in men, judging by the high incidence of insanity during these years. The chart (Fig. 8) of alcoholic insanity illustrates this feature in men in the most striking manner. It is an age when the powers first begin to fail; an age when to keep abreast of younger competitors increased effort is needed; when in golf men are inclined to press, with disastrous consequences.

The climacteric having been surmounted, the incidence of insanity for 15 years falls slowly but steadily. This period, accompanied by a damping down of the fires of emotion, is most valuable. The mind has become stabilized. The energy, the enthusiasm and the

originality of youth may have declined, but wisdom has increased with experience of life. The brilliant advocate now becomes the sound judge; the dashing soldier, the sagacious leader. Men of this dominant age guide the destinies of mankind.

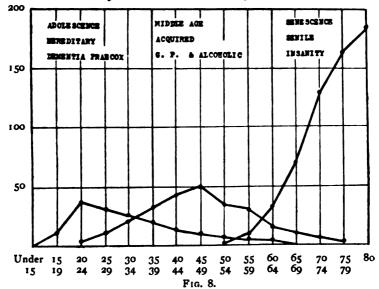
At 64 another crisis occurs, known as the grand climacteric, for the period of senescence has begun. After this the rate of incidence of insanity mounts up year by year with extreme rapidity. Between 65 and 70 it is almost double that of the period of adolescence; over 75 it is almost treble. The connection of the period of adolescence with insanity is recognized by all. But it is not so close as that between senescence and insanity, which is more marked even than the chart shows, as many senile persons are cared for at home, and are never registered as insane.

The grand climacteric is not generally regarded as being so definite a crisis as the climacteric of middle age, but according to this chart (Fig. 7), it is quite well marked. It supports the regulation of the Civil Service that 64 is the age for retirement.

#### HEREDITARY, ACQUIRED AND SENILE INSANITY.

Each of the three critical periods of life is associated with the prevalence of a characteristic type of mental disorder.

The Characteristic Forms of Mental Disorder during Adolescence, Middle Age and Senescence; the Hereditary, the Acquired and the Senile Insanities per 100,000 of the Population; Dementia Pracox, General Paralysis and Alcoholic Insanity, and Senile Insanity.



During adolescence and the early years of adult life the most prevalent and characteristic form of insanity is dementia præcox. This is an hereditary insanity, and external causes play a minor part only in its causation.

During the middle period of life the most prevalent forms of insanity, at least among males, are general paralysis of the insane and alcoholic insanity. These are both acquired insanities. The hereditary or constitutional element plays a minor  $r\hat{o}le$  in their occurrence, which is mainly due to an external and avoidable agent.

During old age senile insanity is responsible for at least a half of the mental breakdown that occurs. It is mainly due to decay of the body and to the wearing out of the machine through age.

These three characteristic types of insanity—the hereditary, the acquired, and the decadent—are associated with these three ageperiods, namely, early adult life, middle age, and senescence, although not limited to them. They will now be referred to in detail.

#### THE HEREDITARY INSANITIES.

Maudsley says in his Pathology of Mind: "A person does not inherit insanity, but a predisposition or tendency," and the unsound strain may declare itself in many ways. There are two forms of hereditary insanity that we will consider, namely, dementia præcox and manic-depressive insanity.

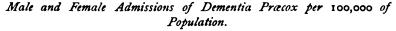
#### DEMENTIA PRÆCOX.

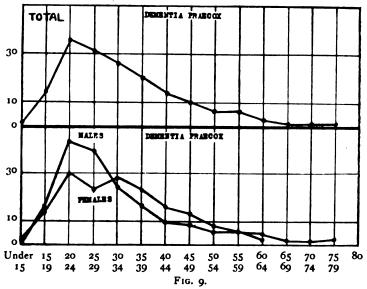
Dementia præcox is most prevalent between 20 and 24 and in the early years of adult life. The early or precocious occurrence of this form of insanity may be taken as evidence of its strongly hereditary nature. Further evidence of this is its malignant character, for only 15% of those afflicted with it recover.

As in the population young persons greatly predominate, the number of admissions of dementia præcox is large; and as the majority of patients suffering from it do not recover, they become permanent residents and fill our mental hospitals. The impression has thus been created that the early period of life is the most liable to insanity. If we refer to insanity in general, adolescence is actually the least dangerous period, as it is not liable to any forms of insanity excepting those that are hereditary. If, however, we refer to the hereditary insanities alone, in the prevention of which the patient is comparatively helpless, then adolescence is undoubtedly a most dangerous period. As the individual grows older the danger of a breakdown from dementia præcox fortunately grows less, and

between 40 and 45 it is only a half of what it is between 20 and 25. This increase of safety is, however, not suddenly acquired after 25 or even after 30, as is assumed by many clinicians when giving advice to those with a hereditary tendency who desire to marry. The advice to delay marriage till 25 or even 30 is quite sound, but the diminution of the risk is not a sudden, but a gradual process, as may be clearly seen from the graph (Fig. 9) of the total number of cases.

Total Admissions of Dementia Præcox in Quinquennial Age-Periods per 100,000 of Population.





Dementia præcox is at first more prevalent among males than females. This feature is confirmed by Kraepelin's statistics, but what it signifies can only be surmised. It may be due to the fact that the sexual problem is felt more severely by males than by females, and that between 20 and 30 the struggle for existence is harder on males than on females, as many of the latter still continue to lead protected lives at home during these years.

#### MANIC-DEPRESSIVE INSANITY.

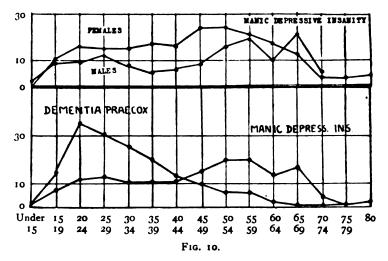
Manic-depressive insanity is the other important form of hereditary insanity. It is not restricted to early adult life, and its prevalence then is not so marked a feature as is the case with dementia

præcox, but its hereditary character is displayed by its tendency to recur. It forms by far the largest proportion of the readmissions to mental hospitals. It is the benign type of hereditary insanity, as the vast majority of patients suffering from it, who are in good bodily health, make excellent recoveries.

Its rate of incidence is fairly high at the later periods of life, owing to the occurrence of involution or climacteric melancholia.

Incidence Rate of Manic-Depressive Insanity per 100,000 of the Population, Male and Female First Admissions Separately.

The Hereditary Insanities: Total Incidence-Rate of Dementia Pracox and Manic-Depressive Insanity in Quinquennial Age-Periods, Separately.



The anxieties of life may at last tell at this period on those with hereditary tendencies, but the occurrence of insanity for the first time at the climacteric or presentle period denotes in individual cases that the hereditary predisposition has not been strong.

Manic-depressive insanity is a disorder of the emotions, and consequently it is more frequent among females than among males. The rate of incidence among females is uniform from 20 up to 40 years of age, and a maximum is reached at the climacteric period. The rate as shown on the chart (Fig. 10) is particularly low in males between 30 and 50, and this may possibly be due to some cases of this disorder being wrongly diagnosed as alcoholic insanity because they had taken to drink. In the elated phase of the disorder the patient drinks because of his high spirits and his loss of the power

of self-control, and in the depressive phase in order to drown his sorrow or to raise his spirits. This explanation cuts both ways; it is so easy to find an excuse for drinking.

#### READMISSIONS.

Readmissions have been excluded hitherto from our statistics, but they may be conveniently referred to here. Out of a total

Diagrammatic Representation of Twenty Years of a Patient's Life to Illustrate the Recurrent Tendency and the Irregular Periodicity of the Relapses of Manic-Depressive Insanity.

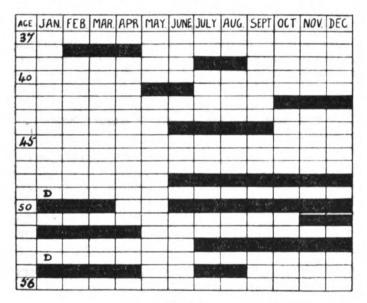


FIG. 11.

of 6,625 admissions there were 1,403 readmissions, or more than a fifth of the whole.

By far the most prevalent form was manic-depressive insanity. It constituted about 30% of the male and 48% of the female readmissions. As it is essentially an emotional disorder it is more prone to occur among women. As it is also recurrent and periodic, relapses are favoured by the functional periodicities of the female sex.

The next commonest form of insanity was dementia præcox, which constituted fully 25% of the readmissions. These two forms of hereditary insanity thus accounted for more than a half of the

male readmissions and three-fourths of the female. There was, however, a striking difference between the benign and the malignant types. Whereas two-thirds of the cases of manic-depressive insanity were readmitted on account of a fresh attack of insanity after complete recovery had taken place, only 15% of the cases of dementia præcox had recovered. The rest were not genuine recurrences, but a continuation of the original attacks.

The chart (Fig. 11) illustrating the recurrent tendency of manicdepressive insanity is taken from Kraepelin. During 20 years the patient whose case has been depicted suffered from 12 distinct attacks of insanity, of which 10 were maniacal and 2 depressive. During the first decade there were 5 short attacks, varying in duration from 2 to 4 months. But during the second decade there were 7 attacks and 4 of these lasted 6 or 7 months. As the patient grew older, therefore, the attacks became more numerous and longer, and 2 of them were depressive in type. More than a half of the attacks began in the months of May, June or July, the onset of insanity being more frequent during the summer than the winter months.

#### THE ACQUIRED INSANITIES OF MIDDLE AGE.

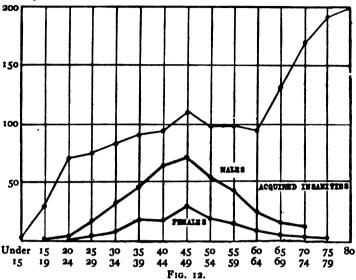
The two most important forms of insanity in middle life are alcoholic insanity and general paralysis of the insane, and both occur more frequently in men than in women (Fig. 12). They account for more than a half of all the insanity that occurs among men between the years of 35 and 55. Both of them are acquired forms of insanity, and therefore preventable. If this object were attained, the graph (Fig. 13) of the incidence of insanity during the middle period of life in males would be very different.

#### ALCOHOLIC INSANITY AND THE INFLUENCE OF HEREDITY.

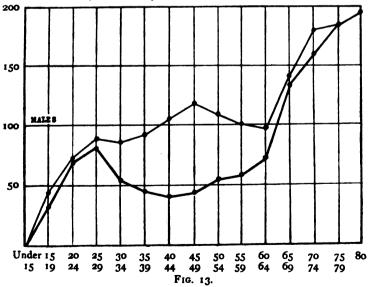
The diagnosis of alcoholic insanity is uncertain, and depends largely on the personal equation of the observer, as the part played by heredity creates uncertainty in every case.

Mercier pointed out that there were always two factors in the causation of alcoholic or any form of insanity—an internal and an external. The internal factor represented the hereditary tendency; the external, some exciting cause in the environment, such as alcohol, influenza or worry. These factors are always inversely proportional. If the internal factor or hereditary tendency to insanity be strong, then the external or alcoholic factor may be weak, and only a small quantity of alcohol may cause insanity (patient "A"); if the hereditary predisposition to insanity be slight, then the external cause is strong and severe, and to become insane, such a patient must drink a large amount of alcohol (patient "B") (Fig. 14).

The Acquired Insanities (General Paralysis and Alcoholic Insanity), Male and Female Admissions Separately, per 100,000 of the Population, with Total Admissions.

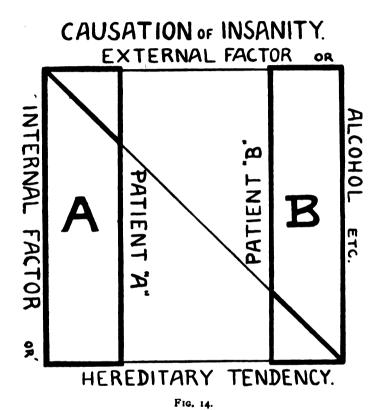


Total Male Admissions in Quinquennial Age-Periods, and Male Admissions from which all Males suffering from Alcoholic Insanity and General Paralysis, Acquired Forms of Insanity, have been deducted. (Prevention.)



LXXII.

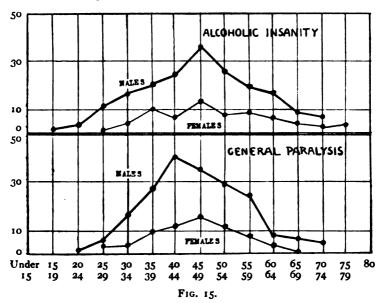
It is thus we account for the fact that some persons become unbalanced by a small quantity of alcohol, while the potations of others are deep and strong, but seemingly harmless. To suffer from alcoholic insanity, therefore, one must first be alcoholizable by hereditary predisposition, and apparently some are very slightly so. Alcohol, according to Féré, is the "touchstone of mental



equilibrium," and to be able to resist its toxic effects betokens a well-controlled mind and a sound brain.

The graph (Fig. 15) of alcoholic insanity in males is as regular and perfect as the outline of Fujiyama, and one cannot fail to accept it as embodying some important truth. The sharp apex of the cone is between 45 and 49 years of age, and this would seem to indicate that there is in the male a climacteric which corresponds to the female menopause. Such a critical period might either make men more susceptible to the effects of alcohol, as has been suggested by Sir Frederick Mott, or may induce them to drink more.

Alcoholic Insanity and General Paralysis. Male and Female Admissions Separately, per 100,000 of the Population.



## GENERAL PARALYSIS OF THE INSANE.

The other outstanding insanity of middle life, at least among men, is general paralysis of the insane (Fig. 15). Its incidence in both sexes resembles that of alcoholic insanity, but it begins later, terminates sooner, and it reaches its period of maximum incidence 5 years earlier than is the case with alcoholic insanity. Its onset is probably determined by the date of infection by syphilis.

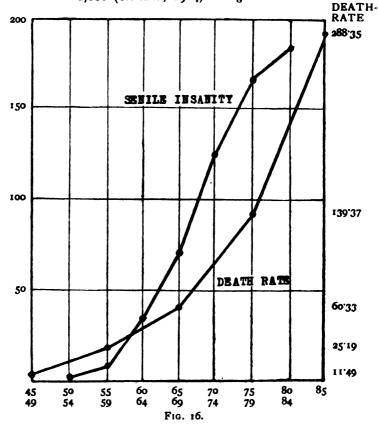
At the International Congress held in Paris in 1922 to commemorate the centenary of the discovery of general paralysis, it was affirmed that no cure for it had yet been devised. We are now in possession of two promising forms of treatment, and if it cannot yet be affirmed of them conclusively that they cure the disease, they at least often stay its course and produce a remission of the symptoms. These remedies are benign tertian malaria and tryparsamide. In early cases after malarial treatment about a third are able to return to work and another third are distinctly improved. Apparent recoveries have also been effected by tryparsamide alone, which is by far the most potent arsenical preparation for the treatment of this disease. There is no reason why the action of these two remedies should not be combined.

While the International Congress of 1922 was engaged in lamenting the absence of a cure for general paralysis, the number of deaths from this disease in England and Wales was found to have fallen in the three years 1919-20-21, as compared with the three preceding years, over 28% in the case of men and 30% in the case of women. Such a decline in a disease deemed incurable was an astounding and unexpected phenomenon that will be referred to later.

#### SENILE INSANITY.

Every human being, if he lives long enough, will suffer at last from the mental decay of old age. The period of involution begins insidiously after 50, but by 65 senescence has definitely set in. There is, however, no physiological process that shows more extreme variations than the time of onset of senectitude.

Incidence-Rate of Senile Insanity per 100,000 and Death-Rate per 1,000 (Scotland, 1924) in Age-Periods.



About the oldest man I ever saw, broken in body as well as in mind, was a little over 50, and his senility had developed with great rapidity. Yet there are many who retain a surprising degree of physical and mental vigour when nonagenarians.

Senile insanity is closely related to the waning of the bodily functions and to the physical decadence that accompany old age, as well as to those diseases to which the aged are liable. It occurs when the death-rate is high, and if its incidence be compared with the death-rate after 45 years of age it will be found that the correspondence is close. The death-rate (Fig. 16) in Scotland in 1924 at 45 was 11.5 per 1,000, and it more than doubled every 10 years till it reached 288.35 per 1,000 at 85 years of age:

Ages	45-54	55–64	65-74	75 <del>-</del> 84	85 and over.
Rates	11.49	25.10	60.33	139.37	288:35

#### THE DEATH-RATE AND SENILE INSANITY.

Dr. John Carswell has made some interesting observations on the relation between the death-rate and the occurrence of insanity.

He selected 10 wards in the City of Glasgow with a combined population of nearly 400,000, and divided them into two practically equal groups, the one with a death-rate below and the other with a death-rate above that of the whole city. These may be called for convenience the healthy and the unhealthy groups. He also subdivided each group into two sections, the one consisting of persons between 15 and 44, and the other of those above 45 years of age—in other words a younger and an older section. No estimate was made of the proportionate numbers in each section.

The Occurrence of Insanity in a Group of Areas in which the Death-Rate was Above the Average of the Whole City of Glasgow, and in another Group in which it was Below the Average.

				<b>.</b>	First attacks of insanity.			
Group.				Population.	Ages 15-45.	Ages over 45.		
Unhealthy				199,000	186	149		
Healthy		•	•	198,000	165	91		
Difference	e in	f attacks	21	58				

Dealing first with the younger sections, and making use of first attacks only, he found that in 3 years there were 165 cases of insanity in the healthy group and 186 in the unhealthy group. This difference was slight, so he concluded that health of body was probably not the main factor in the production of insanity in the

early period of life. From a detailed analysis of the causes of insanity in these cases he ascertained that 67% were due to constitutional or hereditary influences.

Dealing next with the older sections he found a very different state of affairs. In the unhealthy group 149 cases of insanity occurred as compared with only 91 in the healthy group, being an increase of 61%. He therefore concluded that ill-health of body was an important factor in the production of insanity in the later period of life.

Improved social conditions do not apparently lead to any marked diminution in the amount of insanity during early adult life, as the forms of insanity are then mainly hereditary. They apparently reduce the amount of senile insanity, and their influence may be twofold. They may act directly on the health of mind and body of the aged, or the diminution in the amount of senile insanity may be the result of good social conditions enjoyed in early life.

## PART II.

## PREVENTION.

"The first duty of medicine," according to Sir George Newman, "is not to cure disease, but to prevent it." The preventive aspect of this survey falls naturally into a consideration of the measures to be taken to deal with the three types of insanity I have described, namely, the hereditary, the acquired and the senile.

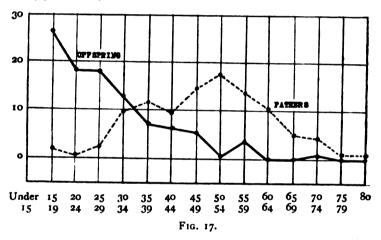
# PREVENTION OF THE HEREDITARY INSANITIES. **EUGENICA.**

It is sometimes alleged, on the original authority of Morel, that when insanity makes its appearance in a stock, it arises at an earlier age and in a more severe form in every subsequent generation, so that in the third or fourth generation it is represented by imbecility and idiocy, and the stock comes to an end. This progressive degeneration was described by Sir Thomas Clouston as Nature's method of killing off a bad stock. There are errors as well as false suggestions in these statements.

When insanity first makes its appearance in a stock there is no necessity for it to continue, far less to arise in an earlier and more severe form in each successive generation. If bad stock marries into bad, the offspring are naturally less fit than either parent, and if this policy be continued for two or three generations the family ultimately comes to an end. But, just as insanity may appear in

a family previously sound, owing to unfortunate mating, so it may also disappear, when it has once occurred, owing to propitious unions. Maudsley was clearly of this opinion. He writes, "There appears to be at work a silent testimony in nature to restore an insane stock to a sound type, if regeneration be possible." Also, "The two principal modes by which an insane strain in a family is worked out of it are, first, propitious unions in marriage, with sound stocks, whereby it is attenuated, neutralized, perhaps

The Ages in Percentages at which Insanity Developed in the Offspring of Insane Fathers and the Ages at which Insanity Developed in the Fathers. Effect of Increased Hereditary Predisposition. Precocity. (After Mott.)



ultimately extinguished; and secondly, propitious dispositions of the circumstances of life." Of these methods he remarks that without doubt the first is most effective.

A process allied to progressive degeneration frequently occurs, to which Sir Frederick Mott has given the name "antedating or anticipation." In this condition an hereditary form of insanity, usually dementia præcox, appears in the offspring at an earlier age than an attack of insanity in the parent.

These precocious attacks of malignant insanity are, I believe, the result of unpropitious unions, for they indicate that the hereditary tendency in the offspring is greater than it is in either parent. The attacks of insanity in the parents, as will be seen in the chart (Fig. 17) occur at an age when the acquired forms are most prevalent and when the hereditary influences do not predominate.

It is clearly a social duty on the part of those inheriting a neuropathic strain to avoid marriage into stocks with a similar weakness, if offspring be expected. In the case of those with obvious mental defect, or subject to a severe psychosis, marriage should not be contemplated. Many will, however, be prepared to risk much, provided the question of offspring can be excluded.

Belief in the evil effects of the marriage of cousins has sunk deep into the popular mind, but in itself consanguinity does no harm, provided the stock be good. Cleopatra, whose beauty and whose intelligence attracted the attention and interest of two such famous men as Julius Cæsar and Mark Antony, was the descendant of a much closer union. In six generations of her immediate ancestors, there were three marriages between full brother and sister.

As for the question of sterilization, I am not convinced by the theoretical arguments in its favour. I believe the bulk of the medical profession regard the proposal as such an outrage on their traditional ideals of duty towards their patients, that its adoption is impracticable in this country. I cannot imagine a board of physicians calmly sentencing a victim to this cold-blooded and superfluous insult.

Enthusiasm has overstepped the bounds of reason when a writer declares that "if sterilization should be permanently prohibited, it will be impossible to prevent a slow but steady deterioration of all such civilized races as are so strongly endowed with human sentiments as to prevent infanticide from becoming a permissible practice."

Our knowledge of the hereditary element in the causation of insanity must be incomplete, seeing that the amount of mental instability actually existing in the general population is still unfathomed. The following little-known inquiry into this subject by so eminent an authority as Sir Thomas Clouston is rescued from the obscurity of an annual report, and if pondered over may temper the zeal of enthusiasts for extreme measures.

## AN ENQUIRY INTO HEREDITARY PREDISPOSITION.

"Nothing is more common than the boast that 'our family at least is quite free from insanity.' It might make the world more pitiful and tolerant, and a little humbler, if the plain fact were more fully realized that few families indeed are free from either mental disease, or those brothers and first cousins of the disease, which may, by like marrying like, be easily transmuted into insanity in the next generation. It would surely tend toward more sympathy and less false shame if it could be shown that in every second family in the kingdom, either mental disease,

congenital imbecility, idiocy or epilepsy, which are all most closely allied diseases of the same part of the brain, could be shown to have occurred in the past three generations. That, at least, is the result I have arrived at from my investigations into the matter. One of the most striking proofs of this was afforded by an inquiry I made into the family history of 83 families, taken at random, in a country parish in Scotland, all the members of which were personally known to me for three generations. I took every family I really knew, and no others. I made no selection. They were all country people, decent folks, hard-working, thrifty, few very poor, indeed mostly money-loving, with scarcely any drunkards. Vice in its grossest forms was unknown. Intermarriage of cousins was no doubt common, for the district is rather isolated. But of bodily degeneracy there is little. At kirk and market the people look a fine healthy race. The mental disease did not always consist of those marked and unmanageable forms of it that have to be sent to asylums for treatment. I took advantage of my intimate knowledge of the people as a doctor, to count in the lesser attacks of melancholia, the milder delusional states and the milder degrees of imbecility, that would not have gone into any public statistics of lunacy or census schedules. Still, they were all mental diseases or defects, just as truly, from a scientific point of view, as our acutest case in Morningside. The result was this, that of those 83 families. I knew that in 41 of them one or other of those four diseases had occurred. And I have no doubt whatever that, if my information had been quite perfect, a few more families would have been found to have produced those diseases. When we consider that three generations do not nearly give a complete field for the investigation of any family tendency, for I have known insanity skip four generations and then reappear in the exact form in which it existed a hundred years before, we see how little room there is for boasting, and how much for manful commonsense and sympathy. Above all, the lesson of this study in heredity is to show how much room there is for the practice of mental hygiene, of moral control, of abstinence from deteriorating agents, of cultivating good health, and of arranging marriages on right principles, to counteract, and in time perhaps to eradicate, those morbid nervous and mental tendencies. Of course there were in those families very strong and very slight tendencies towards those brain diseases in different cases. In many of them there was just one idiot, or one epileptic, or one slight melancholic in the three generations, while in other instances there were many cases in each generation." (Annual Report of the Royal Edinburgh Hospital, Morningside, 1893.)

# MENTAL HYGIENE OF CHILDHOOD AND ADOLESCENCE.

To eradicate "morbid nervous and mental tendencies" is the avowed aim of eugenics, and, stripped of excrescences, it may one day help to lay the foundations of a healthier and a more efficient race. That goal achieved, it must still be remembered that the task of producing healthy-minded men and women does not end. The mind of every human being is a developing organism, bound by its nature to react to the influences of its environment, which produce the most profound modifications. This is especially so if they are brought to bear during the most plastic phase of life, namely during childhood and adolescence. Even the least promising material of all—the defective child—shows the influence of discerning management and an environment adapted to its responsive capacity. That consideration alone goes far to justify the large expenditure of public funds in the provision of special institutions and schools for this class. The pity is that we squander the advantages so laboriously acquired in these by making indifferent provision for lifelong care, and the rectification of this failure is one of the necessities of our time. One might add to it the need for the earliest possible recognition of mental defect, and for a closer study of the ante-natal as distinguished from the hereditary conditions of defect. One authority, Dr. Clarkson, of the National Scottish Institution at Larbert, has expressed the view that anything up to 50% of the defectives under his care owe their impairment, not to the transmission of inferior qualities, but to ante-natal conditions and injuries at birth, many of them avoidable or remediable.

It is with the normal child that the best results are achieved. The mind of man is not born—it is made, and to the making there goes a long succession of agencies, each one leaving its own peculiar imprint. Herein lies the inspiration of psychological medicine. For, as time passes, the inner significance of these agencies emerges more clearly, and with increasing knowledge of them there comes greater ability to control and direct them.

At the outset all these forces are combined in the personality of the mother, and practical hygienic measures must be concentrated on her rather than on the child; the relationship between them is one of absolute dependence on the one side and of almost exclusive devotion on the other. The subsequent development of the child involves the transition from this state of dependence to comparative freedom. The advance is gradual, and many of its steps are taken unconsciously. The social instincts have to be developed through contact with the other members of the family, and later in ever-widening circles with the community at large. During the

pre-school period unlimited opportunities for moulding the character present themselves to the understanding parent. The child must learn to face difficulties with courage and resource, and to clip the wings of soaring fancy. Such a habit of life makes large demands on patience and sympathy, but the results are well worth all the trouble involved. Home influences have subsequently to be tempered by the discipline of school life. Through such experiences the primitive, self-seeking tendencies are subordinated to the higher self, and their latent energy set free for the achievement of social ends. Happy the child whose parents and teachers recognize the need for this sublimation, and ensure its success by the provision of appropriate channels. When a real crisis emerges, the capacity to surmount it will be largely measured by the results of past training and experience.

The danger inherent in this long travail is lest in the end the primary instinctive tendencies should prevail over these educative influences. The former will inevitably fail in the stress of adult life when brought into contact with society, though they do afford an immediate, if transient, satisfaction. Out of the failure to master these temptations is born the type of temperament in which the seeds of dementia præcox and other forms of mental disorder find a congenial soil. Without doubt, the mental hygiene of childhood and of adolescence plays a most important part in the prevention of insanity.

#### PROPHYLAXIS.

A great deal more can be done by means of prophylaxis than has been done in the past. It may be defined simply as the prevention of an attack of insanity when it threatens, but before definite symptoms have appeared. It, however, goes further than this, as it includes the taking of measures to avoid conditions arising which would favour an attack, for hygiene of the mind and of the body is prophylaxis in a general way. The term is applied here to particular steps taken with the immediate object of protecting the mind when actually threatened by danger.

There are certain persons for whom prophylaxis is almost essential. For example, those with a known hereditary predisposition who have already suffered from an attack, and more especially those in whom the attack has been of a recurrent type, such as manic-depressive insanity. When such a case occurs the family physician should also bear in mind that the other members of the family inherit a similar predisposition.

What are the indications or warnings that should be attended to? First among these is loss of sleep. The neuropathic individual

is usually a bad sleeper, so every time he loses a night's sleep, it must not be assumed an attack of insanity is impending. But extreme or prolonged insomnia is a danger and precautions should then be taken.

Sleep should be sought in natural ways and encouraged by avoiding everything that might prevent it, but a time comes when hypnotics administered with knowledge and under strict medical supervision are of the very greatest value. The public hear much of drug addiction or mania, though happily less frequently now than formerly; the general physician is familiar with the craving for "tonics" and other medicines, but only the psychiatric physician comes in contact with the layman's horror of hypnotic drugs, which, despite its manifest advantages, interferes occasionally with prophylaxis.

Running insomnia close as a warning is prolonged anxiety that cannot be dislodged. The evils that follow in its train are many, and at the climacteric and presentle periods of life they may culminate in a mental breakdown. Its causes may be real, and how to ease the tension before matters grow worse may be very difficult. It may be possible to make only a choice of the less of two evils.

The victims of the strain of anxiety may complain of many symptoms, of restlessness, of irritability, of being unable to settle down to work, of having difficulty in fixing the attention and of insomnia.

Another danger-signal is mental and physical exhaustion. While rest alone will benefit those cases which are simply due to overwork and want of sleep, in other cases, unless the primary cause be discovered and removed, the improvement will be only temporary. The functions of the nervous system may be lowered in tone, and a state of neurasthenic fatigability produced by prolonged poisoning from a septic focus. Mental depression alone is also accompanied as a secondary symptom by a failure of energy, both mental and physical.

A change of character, not amounting to actual insanity, is another important sign, particularly in those who are subject to manic-depressive insanity. In this form of insanity there are periodic phases of variable duration in which the patient is morbidly elated and others in which he is morbidly depressed. In addition many people, including some of the most able and brilliant, are subject to similar moods, not amounting to insanity, who are said to suffer from cyclothymia or to possess the cyclic temperament. These changes of mood can be controlled only to a limited extent, but much can be done to prevent them developing into something definitely morbid.

The measures employed in such prophylaxis are of the simplest kind—change of surroundings, new interests, congenial occupation, life in the open air, relaxation, rest, sleep, moderation in all things, and attention to the bodily health.

The one important rule for the predisposed is not to ignore danger-signals or warnings. A sign may be a simple, even a trivial affair, yet it may mean much.

#### EARLY TREATMENT.

It is a commonplace that the earlier treatment is begun, the more hopeful are its results, but early treatment implies a recognition of the early symptoms of disease. There is still much difference of opinion as to the early symptoms of insanity. It is believed by many that some of the cases receiving treatment for the prevention of insanity would not develop insanity were they to receive none. They believe that these cases of the psycho-neuroses, which others regard as exhibiting the early stage of insanity, suffer really from a definite type of mental disorder of a different kind. It is even alleged by them that the presence of a psycho-neurosis is a protection against insanity. This is a point of some importance, as patients and the friends of patients may be alarmed unnecessarily by those who have had little experience of true insanity.

At the International Congress of Mental Medicine held in Paris in 1889, when this question was considered (Comptes Rendus, p. 36), it was agreed that psychasthenia, consisting of obsessions accompanied by anxiety, hesitancy in thought and action, and physical phenomena, preserves the same psychic character throughout the whole life of affected individuals, and does not change into other forms of mental disease. In rare instances it may be complicated with delusions of persecution, with anxious melancholia and with hallucinations.

I am inclined to agree that once a psychoneurosis has assumed a definite form, although it varies from time to time in its severity and in the details of its symptomatology, it does not tend to alter its character, or to assume that of insanity, any more than one definite form of fully developed insanity tends to alter into another. To this extent the treatment of the psycho-neuroses is not the early treatment of insanity, nor can such treatment claim to prevent insanity from developing when that danger does not exist. To this extent also the existence of a definite type of psycho-neurosis may be said to protect the individual from the occurrence of actual insanity, except in rare instances. I, however, qualify this opinion by the observation, that at an early stage it is impossible to foretell whether transient, vague and disorderly mental phenomena will

develop into a typical psycho-neurosis or into a definite form of insanity. There are thus two stages—an initial stage when anything is possible, and a later stage when the type is fixed.

## PREVENTION OF THE ACQUIRED INSANITIES.

In the middle period of life, when the acquired insanities are prevalent, the benefits of prevention are more noticeable because they are more immediate. Alcoholic insanity and general paralysis have been referred to as occurring at this period, but there are many other forms. There are, for example, the confusional insanities, called from their causation the infective-exhaustivetoxic insanities. Although in these, as in all forms of insanity, hereditary predisposition plays its part, they are largely acquired and can often be prevented. Among these are the insanities following infection, such as influenza, typhoid, malaria, etc., including syphilis; mental breakdown due to nervous and physical exhaustion, the result of ill-health, overwork and prolonged and harassing anxieties; toxic insanities due to the ingestion of chemical poisons, such as alcohol, morphia and cocaine; insanities, also toxic, resulting from a concealed source of poison, such as a focal inflammation or a catarrh of a mucous surface; and lastly toxic insanities, called endogenous, due to disturbance of the chemical processes of the body, as in diabetes and myxædema.

Nothing need be said about these forms of insanity excepting that due to myxædema. This is caused by a deficient secretion from the thyroid gland, and it can now be treated with success by providing the body with that secretion artificially. Myxædematous insanity has, therefore, in consequence diminished almost to the vanishing point since the discovery of its cause was made.

Just as heredity is a factor to be reckoned with to a greater or less extent, in every case of insanity, so we are beginning to recognize that disturbance of the internal secretions plays a more or less important part in all forms of mental disorder. I venture to predict that if the future holds for us a great therapeutic discovery in the domain of mental disease, it will be found in a greater knowledge and control of the internal secretions.

A good example of this is the power we now possess of preventing goitre and cretinism, the latter being a form of mental defect. These diseases are due to the absence of iodine in the food and drink of the victims, and this iodine is prepared for the body in the secretion of the thyroid gland. By the administration of minute quantities of iodine in the water or salt to people in affected regions these diseases can be prevented. We thus have an example of a severe mental disease or defect traced to its source and prevented

by the removal of the cause. The cause is infinitesimal, its action is insidious, and it operates through the agency of an internal secretion, yet its effects on the mind are very marked.

#### ALCOHOLISM AND TEMPERANCE.

As regards the prevention or abolition of alcoholic insanity, there is a very simple way of effecting this, provided it is voluntary. But even if alcohol were prohibited, not in the legal, but in the real sense, the total number of cases of insanity would not be diminished by the full number of cases diagnosed as alcoholic insanity. Many of these, owing to inherent instability, would break down from other causes in the absence of alcohol. On the other hand, alcohol is a contributing factor, but not the principal cause of insanity in many other cases, and in these abstinence might be the means of averting insanity altogether.

Alcoholic insanity is diminishing, though not so rapidly as most people desire. Statistics on this subject are open to criticism, nevertheless I give the records of the Royal Hospital at Morning-side from 1907 to 1920, after which date the figures are not comparable.

Percentage of Admissions, Males and Females separate, Suffering from Insanity in which Alcoholic Excess was believed to have been the Exciting Cause, during the Seven Years before and after the Outbreak of War.

,	Year.	Male.	Female.	Year.	Male.	Female.
	1907	13.6	9.2	1914	16	4.6
	1908	15	7.5	1915	10	2.5
:	1909	16.4	9.8	1916	10.8	4 · I
:	1910	13.9	11.2	1917	15.5	3
:	1911	28.9	9.7	1918	10.5	2 · 4
. :	1912	14	8.6	1919	12.6	I · 2
	1913	12.5	11.5	1920	13.3	I
4	Average	16.3	9.6	Average	12.6	2.6

The trend of these statistics is confirmed by the Report on Temperance presented this year to the Church of Scotland, which states that a great deal had undoubtedly been achieved during the last 20 years. The number of "dry" areas remained nearly the same as formerly, but there was evidence that the drinking customs of the people were surely, if slowly, changing for the better, and that the habit of drinking was on the decline. It was no small boon that drunkenness was on the decrease, and in some places had entirely disappeared.

## GENERAL PARALYSIS, EDUCATION AND SALYARSAN.

The other important form of acquired insanity is general paralysis. It has already been mentioned that there are two promising remedies for its treatment after it has actually appeared. It was further stated that an astounding fall in the number of deaths had been recorded in 1919, which has continued, and this is of supreme interest from the point of view of prevention.

The following is a table recording the annual number of deaths in England and Wales from general paralysis:

Year.	Male.	Female.		Year.	Male.	Female.
1907	1,775	557	•	1916	1,727	<b>36</b> 8
1908	1,713	504		1917	1,940	422
1909	1,817	546		1918	1,729	341
1910	1,723	490		1919	1,336	272
1911	1,751	435		1920	1,270	234
1912	1,799	458		1921	1,245	283
1913	1,724	399		1922	1,398	300
1914	1,820	423		1923	1,402	305
1915	1,818	428		1924	1,257	287

From 1907 to 1918 inclusive the number of male deaths was steady. For 8 years the biennial numbers did not vary more than 10. In 1919–1920 there was a sudden drop of 26% in the number of deaths, and the following (Fig. 18) appears to be the probable explanation of this unexpected result.

General paralysis may develop within 3 years after syphilis has been contracted, but it is not till 7 years have elapsed that it occurs with any frequency. It attains its maximum rate of incidence in the tenth year after infection. Of those attacked, more than a half die within 2 years after the first appearance of the symptoms, which are usually present for a year before the patient is admitted to a mental hospital. If, therefore, persons develop general paralysis 7 years after infection, and if a half of these die within 2 years, we require to go back 9 years to find an explanation for any variation in the death-rate. In other words, to explain a sudden fall in the number of deaths in 1919 we require to investigate conditions in 1910. If this be done an explanation is found in the employment during that year of salvarsan, and the cure by its use of those males who contracted syphilis. As the fall in the number of deaths in 1919-1920 is 26%, it is certain that many who had contracted syphilis previous to 1910 and 1911 also took advantage of the discovery of the new remedy and thus did not develop general paralysis and die. The annual incidence of the development of

general paralysis never exceeds 8% of the total except in the tenth year after infection, when it reaches 11%. This exceptional frequency in the tenth year is no doubt fallacious and is due to ten being a round number.

A chart (Fig. 19) has been designed from the numbers given in the table which illustrates the deaths in biennial periods, and as the

Diagram to Illustrate the Number of Years that Elapsed after Infection by Syphilis before General Paralysis Developed in 610 Patients, with the Number of Cases each Year and the Approximate Percentage of the Total Number each Year. Compiled from Kraepelin, Junius and Arndt, and Fournier.

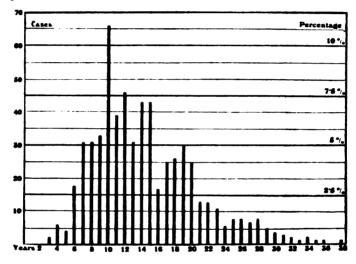


Fig. 18.

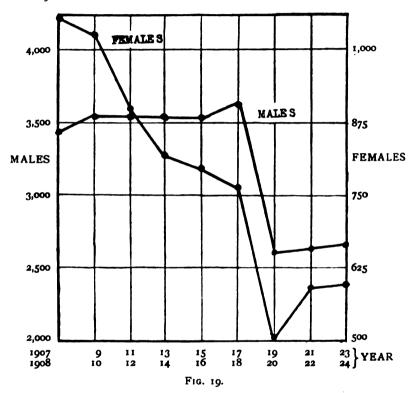
proportion of deaths of males to females is about 4 to 1, the graph for females has been enlarged four times to make its variations comparable.

The graph for females is remarkable, as there is a steady fall from 1907 to 1918, which amounts to 28%. Great as this reduction is, it cannot be attributed to the treatment women received, as comparatively little was done for them till venereal clinics were established in 1920. The explanation of this fall is believed to be as follows:

Syphilis is infectious, and in dealing with infectious diseases the treatment of the individual case is of less importance than the prevention of the spread of the disease. During the first decade of the century treatment by mercurial inunction was employed, LXXII.

and this form of treatment was a long one. The opportunity was taken of instructing male patients regarding the nature of the disease they were suffering from and of appealing to them to avoid

Numbers of Deaths from General Paralysis in England and Wales in Biennial Periods from 1907 to 1924, Males and Females Separately. Graph of Females Four Times Enlarged as Compared with Graph of Males.

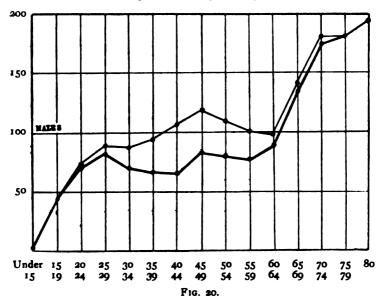


infecting others. Many men, it would seem, had the good sense and the good feeling to act on this advice, but the result was strangely one-sided. In other infectious diseases, when precautions against infection are taken, benefit is received by all alike. Syphilis, however, is exceptional, as it passes from one sex to the other, and if one sex only adopts measures to avoid spreading infection, the whole benefit of these preventive measures is received by persons of the opposite sex, who have taken no precautions themselves. It is thus that we account for the continuous fall of the female

death-rates of general paralysis from 1907 to 1918, while the deaths of males remained stationary or even tended to rise.

There was a further fall of 33% in the number of female deaths from general paralysis in 1919–1920, as compared with the two previous years. This corresponds exactly with the fall in the deaths of males in time and proportion, but it was not due to the treatment of females directly by salvarsan as was the case with males. It may, however, be traced to the introduction of a rapid

Total Male Admissions in Quinquennial Age-Periods and Male Admissions from which all Males Suffering from General Paralysis have been Deducted, per 100,000 of the Population.



method of curing males of syphilis, with the result that the infectious stage of their disease was cut short by salvarsan, and fewer women became infected by them.

These observations teach us two lessons. The first, the success of modern scientific methods in preventing the most terrible malady to which man is subject. It attacks him in the prime of life, it obliterates every human attribute, it degrades him below the brutes, and it finally kills him. The money spent on clinics for the treatment of venereal diseases will in a few years be amply repaid by the prevention of this disease alone. In Edinburgh, one clinic out of many, about 1,000 cases of syphilis are cured every year. As 3 to 5% of those infected with syphilis develop general paralysis,

30 to 50 cases of this disease are now being prevented from developing every year in this city alone. Similar results are being obtained all over the country. The practical abolition of general paralysis would make a decided difference to the incidence of insanity among males in the middle period of life (Fig. 20). It is a consummation that may be attained within a generation.

The other lesson is the effect of educational propaganda and publicity. I attribute the whole fall in the number of deaths from general paralysis among females up to the year 1918 to the instruction given to infected males. I believe also that those who have mainly benefited by the knowledge thus imparted have been the innocent wives of the less educated classes. Among these the proportion of women to men suffering from general paralysis is about 1 to every 4, but it may be as high as 1 to every 3. Among patients of the richer and better educated classes, for example, among those who are treated at Craig House, Morningside, the proportion is very different; during the last 24 years there has been only one lady admitted to Craig House suffering from general paralysis as compared to 73 men. This poor woman, a member of a wealthy and philanthropic family, married a drunkard; her only child is now insane.

It must not be concluded that a similar appeal to women will be followed by as striking results as have followed the appeal to men. The majority of women, being innocently infected, do not at present spread infection. An appeal to these is unnecessary, and would result in little good. There is, however, an active minority of immoral women, forming the human reservoir of syphilis, who broadcast disease, and to these appeal has hitherto been made in vain. Nevertheless this source of deadly danger must be swept away; this supply of virulent poison suppressed. Such women may be induced to come for treatment in their own interest; but they must come.

#### PREVENTION OF SENILE INSANITY.

As to measures for the prevention of insanity during senility, we are guided by the knowledge that the later in life insanity begins, the less important is the factor of hereditary predisposition in its causation; and, that in all forms of insanity occurring during senility, the influence of the bodily health, if not paramount, predominates.

The margin of bodily resistance to mental breakdown is less in old age than at any other period of life, but senescence is a period of retirement, of a withdrawal from the fierce zone of life's battle.

There is then not only decreased alertness of mind and diminished

vigour, but a lowering of the sensibility which softens the effects of the harsh blows of fate. Sickness benefit, old age pensions, improved housing, better sanitation and a higher standard of living may also be expected to have a direct effect in reducing the amount of insanity during this period of life.

For the prevention of insanity during senility, we must begin to interest ourselves in bodily and mental hygiene at a much earlier stage. The diseases of old age are usually insidious in origin and gradual in development, and their seeds have been sown in middle life or even earlier. Syphilis and chronic alcoholism may not lead, for example, to any form of insanity in the early or middle periods of life, but owing to a progressive degeneration of the blood-vessels of the brain, and to a general lowering of the vitality, they may induce premature and marked senility and be the essential agents in the causation of insanity late in life. Prevention then is too late. Preparation for a healthy old age by careful living during the middle period of life is the best insurance against senile insanity, just as the avoidance of unpropitious unions is the best method of preventing the hereditary forms of insanity in succeeding generations.

In the population of Scotland the senile period of life has relatively increased in recent years. The general death-rate in this period has not fallen in spite of the advances made in public health. It would, therefore, seem as if in the past there had been in operation a process of weeding out of the less fit, before old age was reached, whereas at the present day there was an opposite process for their preservation so that more attained to old age. There is some reason to believe that, like the death-rate, there has been no reduction in the rate of incidence of insanity during the senile period. It is difficult, however, to give a decided opinion on this question.

The measures employed to prolong life increase both the number of the aged in proportion to the rest of the population and the total amount of insanity, for senility is the greatest insanity-producing period of life. If this be associated with later marriage, a falling birth-rate, and emigration of the young and fit, so that there is a proportionate diminution of the non-insanity-producing period of life, then in spite of all the efforts of mental and physical hygiene—indeed, partly on account of them—the amount of insanity in proportion to the total population will show a marked increase. These statistical fallacies have to be eliminated before the relative amounts of insanity from year to year, or in different areas, can be compared with accuracy. The alarmist, naturally, does not trouble to do this.

## IS INSANITY ON THE INCREASE?

All nations seem to pass through periodic phases in which fears arise that among them the occurrence of insanity is on the increase. Esquirol, the greatest psychiatrist of modern times, said he was sick of hearing the question asked. In 1824 he read a paper in Paris, before the Royal Academy of Medicine, entitled, "Is there more insanity to-day than there was forty years ago?" in which he endeavoured to reassure the people of France. In 1788, during the reign of George III, the people of England passed through a similar phase of anxiety, and such fears have at times obsessed Germany and Italy.

So far as can be judged the outlook in this country at the present time is distinctly favourable. In support of this I submit a table dealing with the registered insane population of Scotland during the last 15 years. The total number of insane persons has fallen from 390 per 100,000 in the first quinquennium to 369 in the last; and the number of insane persons registered annually for the first time has fallen from 2,828 in the first quinquennium to 2,731 in the last, although the population has increased in number. In these statistics there is no cause whatever for alarm, although the apparent decrease of insanity may be partly due to the operation of different methods of dealing with the insane.

Years.	Population of Scotland.	Total registered insane at 31st December.	Number of registered insane per 100,000 of population.	Number of insane registered annually for first time.
1910	4,751,000	18,059	381	2,643
1911	4,741,300	18,419	387	2,827
1912	4,733,700	18,552	391	2,715
1913	4,747,167	18,682	394	2,908
1914	4,785,598	18,971	399	3,048
	À			
Avera	ge of 5 years .	. 18,537	390	2,828
1915	4,824,308	18,842	394	2,972
1916	4,854,738	18,661	387	2,772
1917	4,886,274	18,125	373	2,520
1918	4,894,100	17,601	360	2,678
1919	4,864,396	17,432	356	2,867
Avera	ge of 5 years.	. 18,132	374	2,762
1920	4,882,288	17,665	363	2,925
1921	4,907,900	17,893	366	2,837
1922	4,915,500	18,122	369	2,840
1923	4,869,100	18,266	372	2,512
1924	4,881,637	18,276	375	2,544
Avera	ge of 5 years .	. 18,044	369	2,731

#### CONCLUSION.

In conclusion it must be apparent to everyone that the problem of preventing mental disorder is not a simple one. It resembles the analogous problem of the prevention of tuberculosis, and from the campaign for the prevention of that disease much can be learned. The possible causes of mental derangement are legion, and the possible combinations of these, in individual cases, beyond counting. It is clear that the prevention of mental disease cannot be attained by any royal road.

The claims of the individual sufferer are in the first place paramount and must be studied, for every case of threatened breakdown presents a unique problem. It may have features in common with others; it certainly will present features peculiar to itself. Intensive study, therefore, of individual cases, so as to disclose these causative factors, is the primary duty of the psychiatrist. If that duty be not discharged, treatment will be confined to a few rule-of-thumb precepts, and its results will be disappointing.

Secondly, what can be done in a more general way for prevention is well illustrated by the case of general paralysis. By disseminating, as widely as possible, information as to its mode of attack and the methods of prevention, a real contribution has been made to the mental hygiene of the community. Encouraged by that success, let us see to it that our knowledge of the origin and development of other disabling mental conditions is as effectively applied.

In the opening up of purely preventive channels a great responsibility rests on practising psychiatrists. It is futile to lament that those of unstable equilibrium turn elsewhere for help—to the quack, to the charlatan, to the barren ritual of the latest cult. The blame for this state of affairs is shared by the psychiatrist. Far too long has he sulked in his cave; now he must come out into the market-place. His interests are not confined to his duties within the mental hospital. He must co-operate with the general practitioner, and get into touch with the outer world through the agency of out-patient clinics and social service workers. He must prevent as well as treat insanity.

An expert body of psychiatrists, trained in every device of medicine and psychology, and diligently applying themselves to part of those in mental difficulties or about to be overwhelmed. these clamant needs, will avert much needless suffering. Let none be daunted by the magnitude of the enterprise that is envisaged, but rather find in it an incentive to persistent and coordinated effort, and the hope of a great reward.

[Note.—An appendix containing tables of figures will be published later.—Eds.]

The Physico-Psycho-Galvanic Reflex in the Neuroses and Psychoses.

(Essay for which was awarded the Bronze Medal of the Royal Medico-Psychological Association, 1926.) By P. K. McCowan, M.D.Edin., M.R.C.P., D.P.M.

Discussing experimental psychiatry Kraepelin observes that lack of comprehension of the experimental test, lack of ability to execute it, lack of interest, of co-operation, and of endurance, all conspire to increase the task of the experimenter and to modify the value of the results. The consequent demand for trustworthy experimental methods, which without too complicated technique and too unusual demands on the patient shall yield information of significant variations from the normal in quantitative terms, voices at once the need and the embarrassment of the experimental psychiatrist. The determination of the electrical conductivity of the skin is undoubtedly one valuable method of approach in this search after quantitative information, and this paper is the result of some months' investigation which I carried out at the Maudsley Hospital, when, through the kindness of the Medical Superintendent, Dr. E. Mapother, I had put at my disposal cases of psycho-neuroses and early psychoses.

## HISTORY OF THE GALVANIC REFLEX.

In 1888 Féré demonstrated that emotions caused a change in the electrical properties of the skin. Such a change took the form of a lowering of the resistance of the body to the passage of an electric current. In 1890 Tarchanow independently made the same discovery, and considered that the explanation lay in changes due to the secretory glands of the skin. These experiments were confirmed in 1902 by Stricker, but it was not till Veraguth's work in 1904 that much notice was taken of the subject. Veraguth confirmed the experiments of the previous workers and called the reaction the "physico-psycho-galvanic reflex," defining it as "a diminution of the resistance of the skin to the passage of a constant current occurring as a response to stimuli which caused an alteration of the affective state." The work of Gildermeister, confirmed by numerous other workers, has shown that the reflex is most easily obtained in the palms of the hand, less easily in the soles of the feet, and practically not at all in other parts of the body.

#### EXPLANATION OF REACTIONS.

Crile has demonstrated that an increase of electrical conductivity, or conversely a diminution of resistance, is associated in all tissues

with an increase in their metabolic activity, and we may regard the galvanic reflex as a sign of increased activity of the glandular tissues of the skin. This increased activity must be due to stimuli from the sympathetic, and like the other mechanisms which take part in the general bodily reaction to nervous stimuli, it would appear that the galvanic reflex is conditioned by the response of the thalamic system. That changes in the peripheral blood-supply are not causal of the reflex was shown by Veraguth, who obtained normal responses after rendering the limb bloodless by means of an Esmarch bandage.

# Nature of Causal Stimulus.

We may safely disregard such absurdities as "subconscious feelings," and posit that an affective state, to exist at all, must be experienced by the subject. This being so, it can be said that the galvanic reflex may take place without any affective state accom-In word-association tests it frequently happens that a stimulus word calls forth a definite galvanic response without the subject experiencing any corresponding feeling tone. He is certain that the word left him indifferent, and at first he is often unable to find any association of emotional significance. The fact that further examination usually succeeds in unearthing such an association shows that the stimulus has activated a specific reflex system which at one time had a connection with the mechanism of feeling, but does not negative the statement that the subject did not experience any feeling in connection with the word that called forth the galvanic reflex. The same point may be verified by purely introspective investigation. When a painful stimulus, such as a pinprick, is applied or threatened, a well-marked galvanic response is obtained. Repetition of this stimulus leads to indifference, but in spite of the absence of any feeling of apprehension, the galvanic reflex continues to be elicited. Many workers have held that the reflex accompanies mental effort as well as states of feeling. but my investigations satisfied me that normally this is not the case. If the effort be so great as to be disagreeable, the accompanying sensations may act as a specific stimulus and call forth a reaction, but mental effort per se does not do so. Thus in the word-association test it was often found that long reaction-times were not accompanied by a corresponding galvanic response, and in such cases it was found on interrogation that the delayed reaction-time was due to an intellectual difficulty, such as not being able to think of a word or unable to decide which of two or more words to sav. In fact, one of the most striking things to me in my investigation was the demonstration of the fallibility of the reaction-times as a

method of unearthing complexes. Very often was a marked galvanic response accompanied by a short reaction-time, and no galvanic response by a long reaction-time. This happened much too frequently to allow of this method of investigation being regarded as anything but very "rough and ready." Taken in conjunction with the galvanic reflex, however, it may be regarded as a valuable adjunct. In the word-association tests it was generally found that the first half-dozen words called forth a galvanometer deflection, even though they were essentially "neutral" words. This is simply an expression of a state of anxiety on the part of the subject, who soon settles down and only responds to words having an emotional significance.

It was shown by Golla that the galvanic reflex is quite outside voluntary control. Thus it is impossible to inhibit it, and again, simulated emotion fails to evoke it, while the declaiming of poetry or drama, no matter how emotional the theme, cannot call forth the reflex. The theory that the good actor actually experiences all the emotions he depicts is therefore definitely disproved.

The degree to which the subject has had his organism affected by an emotional experience is shown by the completeness of representation of that experience. The subjective test is often faulty or inconclusive here. Often it is difficult to decide whether the remembrance of a past experience actually grieves us, or if it is merely a subject over which we consider we ought to feel grief. The galvanic reflex gives invaluable aid here, as in the first type of experience the reflex is obtained, whereas in the second no galvanometric deflection takes place. It is very interesting to sit quietly and recall past experience while connected with the galvanometer circuit, and notice into which of these two categories many of one's own recollections fall.

Golla has shown that when the patient is subjected to an examination not exceeding ten minutes, the magnitude of the response varies directly with the strength of the stimulus. He, however, points out that caution must be exercised in applying this finding for physical stimuli to stimuli evoked by the subject's own representations. Even with single and easily controlled physical stimuli this law can be relied upon only when the stimuli are not separated by too great an interval and the general attitude and condition of the subject is approximately the same. This has been remembered and allowed for in the present investigation, as is indeed essential. Especially in the neurotic does fatigue enter in to complicate the picture, and if the examination is at all prolonged the liability to fatigue of the patient is shown in the failure even of "key" words to evoke any galvanic response.

To sum up, we may say that the stimulus which calls forth the galvanic reflex must be of the so-called "nocuous" type. It is an inevitable response which cannot be modified to any degree by any other form of activity. This characteristic it shares with other responses which can be studied objectively, but it alone of all these responses is specific to nocuous stimuli. This it is which makes its study so very important in any objective investigations into the neuroses.

Just as there is no galvanic reflex as the result of mental effort, so also is there none in response to "benign" stimuli, that is, stimuli which tend to further and perfect life. Pleasant experiences or their representations quite fail to call forth any galvanic response which can be confused with the response to nocuous stimuli. Any response which is got under these circumstances is merely a slowly developing increase of resistance, and this is rarely got unless the resistance has previously been temporarily lowered by a previous nocuous stimulus.

## RATIONALE OF PRESENT INVESTIGATIONS.

The patient is introduced into one arm of a Wheatstone bridge circuit and a current of 2.8 volts passed through his hands. Some experiments are done with hand, some with finger electrodes. Owing to the greater resistance in the latter the galvanometer deflection is much less, and on the whole the former is more satisfactory.

The hand electrodes consist of thin pieces of perforated zinc, covered with pads of blotting-paper soaked in warm saline. These pads are kept in position, one in the palm of the hand and one on the dorsum, by a spring arrangement. A convenient size for the pads is  $1\frac{1}{2}$  in. by I in., the idea being that they should be as large as possible, but at the same time of such a size that their whole surface will keep in contact with the hand even in the event of slight movements. In the case of the finger electrode, the middle finger is immersed in a fairly strong warm saline solution, arrangements being made to insure the comfort of the arm during the experiment and also to preserve the temperature of the saline. The saline in these experiments must not be too strong, as otherwise complications, owing to polarization, etc., arise.

In future experiments it is intended to have the whole hand immersed in saline. In this way a lower skin resistance can be obtained, and consequently the experiment becomes more delicate and the galvanometric deflections greater.

#### METHOD OF INVESTIGATION.

It is essential before recording any reactions that the patient should have got over the novelty of his surroundings, and that he should understand the rationale of the experiment and, preferably, be interested in the same. The following data are noted before any reactions are tried:

- (1) The resistance of the galvanometer circuit.—By suitable adjustment of the galvanometer and universal shunts the resistance of the galvanometer circuit is so arranged as to make the galvanometer conveniently sensitive, but if it be made too sensitive the continual movements of the needle are very disconcerting.
- (2) The skin resistance.—This varies from 5,000 to 50,000 ohms, and is dependent on the temperature and size of the electrodes, the condition of the skin, the concentration of the saline, etc. The skin resistance is much higher with finger electrodes than with hand electrodes.
- (3) The amount of deflection of the galvanometer obtained by interposing additional resistance of 1,000 ohms.—This gives a standard with which to compare movements due to the galvanic reflex.
- (4) The reactions to a rattle and a cough on the part of the subject were then noted, these being of interest to compare with subsequent reflexes due to stimuli from the patient's own representations.

A list of reaction-words is then read out. These are so arranged that words which might be complex stimulators-"keywords"—are separated from each other by words which are considered unlikely to come under this category—"neutral words." The patient is instructed to reply just as in the word-association test, and the reaction-times and the galvanometer deflection are noted. A later test is done to corroborate the results of the previous one, but if the first has given results suggesting an increased affectivity to certain complexes, the "key"-words of the second test are selected with the view to further details of this complex being unearthed. When a marked reaction is obtained the patient is asked to explain the associations, and while this explanation is taking place the galvanometer reading gives further interesting information.

## RESULTS OF INVESTIGATIONS.

Not enough work has been done to arrive at any dogmatic conclusions, but several interesting and suggestive results have been obtained. The most striking was probably the usually complete absence of any reaction in the case of hysterics, the utter failure of their apparently deeply felt responses to cause any galvanometric deflection being most marked. In Dr. Golla's investigation he invariably got this result, but in the present investigations a few cases which were undoubtedly hysteria from a clinical point of view gave evidence of increased emotivity. At the beginning of this investigation the findings suggested that each neurosis had a distinguishing type of affectivity as shown by the galvanic reflex,

diminished emotivity being characteristic of hysteria and dementia præcox, and increase of anxiety neuroses and obsessional neuroses. Soon, however, cases which clinically belonged to one or other of these groups were found to give reactions opposite to what was expected. The impression given was strongly in agreement with that held by so many, namely, that all these neuroses and psychoses are not entities, but merely different syndromes of one and the same disease which have received distinctive names from their presenting symptoms which have struck their "discoverer" as distinguishing. This would explain their changing names from decade to decade. the change being in the view-point or concept of the beholder. Hence is the distinguishing point of hysteria, dissociation, suggestibility, a gross overt lesion, etc., so that what one regards as a case of hysteria another will reject as such. If the galvanic reflex with its proof of increased or decreased emotivity were to be used as a criterion, and the usual diminution of emotivity regarded as the crucial necessity for a diagnosis of hysteria, some of the cases now regarded as hysteria would pass from this category to that of anxiety neuroses, and vice versa. I presume it is agreed that in hysteria the disordered emotional life of the patient is all-important, and if this is so, it appears to me unreasonable to regard as an entity a disease which can be caused by opposites, namely, either a decreased or an increased emotivity. Myers, of course, has pointed out that in mental life antagonistic states may apparently lead to the same results, and this would seem to be a case in point ("Consciousness," Lancet, vol. ii, 1924, p. 1108).

The same remarks apply equally to the other disorders of the mind, designated anxiety neuroses, obsessional neuroses, etc.

In hyperthyroidism, hyper-excitability of the mechanism of affection is shown by the galvanic reflex. In these cases the skin resistance is invariably low.

The explanation of the symptoms of those patients with diminished affectivity lies in the failure of this diminished emotivity to act as the mainspring of their volitions. A nocuous stimulus causes first a cortical reaction of a discriminatory nature, followed by a thalamic one which involves the bodily mechanism of affection. In such patients the first of these is normal, so that they can appreciate a nocuous stimulus normally and act accordingly. Where they are abnormal is in their diminished emotivity failing to reinforce the discriminatory powers of their cortex when the stimulus is prolonged. Thus the recalling of their unpleasant experiences is not accompanied by any of the bodily reactions associated with affectivity, and they therefore are without the normal method of appreciating and reacting to such experiences. As a result they

have recourse to other methods of expression more or less associated with the feeling of unpleasantness. Knowing that bodily ailments are associated with the feeling of distress they should feel, they use this mechanism to present to themselves and to symbolize to others the fact that they are threatened by some nocuous influence. In this sense their symptoms constitute a method of expression, primarily for egoistic and secondarily for social ends, which has been called out by an organic disability of the mechanism of affection. This same disability explains their suggestibility, as it is feeling which constitutes the strongest defence against the irrational. Such a mind being dissociated from feeling is therefore very much at the mercy of any suggestion, whether autogenous or heterogenous. This loss of emotivity in these patients would seem to be a truer and more suggestive explanation of their conduct than that of Babinski's, who holds that their symptoms are purely mimetic, and only separated from fraud in their moral aspect.

The abnormal behaviour of the subjects of increased emotivity is much more easily understood, their increased emotional reactions leading them to attach inordinate importance to their experiences in accordance with their excessive emotions. Thus do trivial events, which normally would scarcely excite apprehension, in these cases cause excessive and ungovernable fear. It is essential for these patients to try and guide their lives by their reason rather than by their feeling.

In still another set of patients the experiment did not unveil a generalized increased emotivity as shown by a reflex to practically every word, but a more or less normal affective state except when certain complexes were touched upon. Here it may be mentioned that by no means invariably was it a sexual complex that was shown to be the most powerful in the patient's psychic life, and especially was this the case in the male patients. Several of the cases had previously been psycho-analyzed, and it must be recorded that though as a result of this a sexual element had always been suggested as the all-important factor, in several cases the galvanic reflex proved this to be false, with the resultant impression that some of the father-fixation and other complexes were figments of the psycho-analyst's imagination.

The cases of early dementia præcox examined did not show a uniform response to the test, some exhibiting diminished affectivity while others exhibited increased affectivity. Not enough cases were included in the series on which to generalize, but it may be stated that those of the hebephrenic type all showed increased affectivity. It would be interesting and instructive to follow up such cases and see if their increased affectivity continued into the

later stages of their disease. In these cases it is often difficult to appreciate the true significance of the reactions obtained. The difficulties mentioned in the introduction to this paper are here very real, the wandering attention and the comparative inaccessibility of the patient often proving troublesome.

## ILLUSTRATIVE CASES.

The following are merely short extracts from cases, reported with a view to illustrate some characteristic reactions.

CASE I.—A married woman of 27, suffering from mysophobia. Marriage was necessitated two years ago owing to pregnancy, and since this event she has felt exhausted and low-spirited. She has been subject to attacks of nervous diarrhoea for years, and as a girl had a phobia about misplacing things. She now exhibits much remorse and apprehension over her pregnancy and has phobiae about vermin and infection. The experiment shows that she has marked affective deficiency, and discussion of her phobiae and pregnancy left the needle unaffected.

Ass	<b>50</b> C	iati	ons.	Reaction-time Galvanic in seconds, deflection,						
SHAME			People				22		• 1	S.R. = 20,000.
King .			Queen		•		1			1,000 ohms= 5.
Quick			People				5			Rattle= 3.
West .			East		•		1			$Cough = \cdot 3.$
Cab.			Taxi				2			• •
VERMIN			Hand				3			
Foot .			Walk				7			
Content			Look				17			
MARRIAG	E		Wedding				2			

S.R. = Skin resistance. 1,000 ohms =  $\cdot$ 5 means that calibrating so as to interpose an additional resistance of 1,000 ohms caused a galvanometer deflection of  $\cdot$ 5.

In a case like this where practically no reactions are being obtained it is not necessary to interpose many neutral words between the "key"-words.

CASE 2.—A single woman of 35, with psychasthenic symptoms. Thinks she was alright up to 18 months ago, when she fainted in the street when out looking for her Pomeranian dog which she thought was lost. Since then she has been afraid to go out alone, and has also developed a feeling of subjective deficiency. A tremor makes the test very difficult, but as the test proceeds she forgets about her tremor and settles down. Her reactions are then practically nil. A discussion of her fears leaves the galvanometer unaffected. She has several long reaction-times without any corresponding galvanic reflex.

Associ	atio	ns.		ction- second		
RESPECTABL	.E	Good		65	· 1	S.R. = 14,000.
Pretty .		Nice		2		1,000 ohms $= \cdot 5$ .
DEATH .		Peaceful		5	• 1	Rattle $= \cdot 2$ .
Dry		Air		30		
Afraid .		Nervous		2	• 2	
Dog		Animal		2		

CASE 3.—A single woman of 30. Has been under certificate four times with attacks of mania and melancholia. Her father was alcoholic, and she gives a history of sexual incidents with him when she was from 13 to 15 years of age.

Has had strong sense of shame since, owing to conflict with her religious and moral scruples. She is intolerant of authority, as it reminds her of her father, whom she regarded as a tyrant. She has a history of fainting attacks and seizures at various times. At the time of experiment she had symptoms of hypomania. Her reactions show defective affectivity.

Λs	ons.		ction-tir seconds	Galvanic deflection.		
SIN .		Shame		14	• 2	S.R. = 26,000.
Cold .		Warm		10		$1,000 \text{ ohms} = 2 \cdot 0.$
Near .		Fan		. 5		Cough $= \cdot 2$ .
Shade		Good		15	-	Rattle $= \cdot 1$ .
Bright		Cheerful		1		
FATHER		Mother		1		
MAD .		Asylum		12	٠3	

CASE 4.—A single woman of 32, with an obsessional neurosis. She has an obsession that she will do bodily injury to someone. This someone has varied from time to time, but has always been someone whom she liked. Her life has been a hard one, and her future is not at all bright. She is very sorry for herself and inclined to be dramatic. Test shows defective affectivity.

Associations.								Galvanic deflection.	
KILL.			Friend .				6		S.R. = 20,000.
Young			Aged .				5		1,000 ohms. $= 6$ .
Pretty			Commonp	lace			5		Rattle $= \cdot 6$ .
DEATH			Immortal	ity			2		$Cough = \cdot 4.$
Dry .			Water .				6		•
AFRAID			Confident				2		

CASE 5.—A single man of 33, with symptoms suggestive of an anxiety neurosis. Most of his life he lived with an aunt, who died recently. He was much attached to her, and was very grieved by her death. He had to help to lay her out, etc., and was much upset by the smell and signs of decay. He became engaged shortly afterwards, and says he will marry if he gets better; his "unconscious motive" probably lies here. Complains of much sweating, tremors, pressure on head and fear of death. He shows no galvanic response to any of his various complexes, and to cough and rattle his response is very slight. Unlike most cases of anxiety neurosis he therefore exhibits affective deficiency.

Association			Galvanic leflection.	
Home	Aunt	4		S.R. = 20,000.
Cold	Snow	2	_	t,000  ohms = t.
RESPECTABLE	My Aunt .	I		Rattle $= \cdot 1$ .
WOMAN	Maud (hissister)	4		Cough $= \cdot 1$ .
DEATH	My Aunt .	I		· ·
AFRAID	Not afraid	•		

CASE 6.—A girl of 16, with various psychasthenic symptoms; periodic headaches and loss of memory; emotional outbursts, when she will throw herself on the floor, and at other times talk incoherent nonsense. Subject to nightmares. She has always been very sensitive, with a strong negative-self feeling and subjective feelings of deficiency. She is much given to self-pity. Her mother died when patient was four years of age, and she has not got on too well with her stepmother. Her reactions are all very high, showing excessive affectivity. Her strong self-regarding sentiment with negative self-feeling is much in evidence in her reactions; that to her dead mother is highest, and others to her home, to her present illness, and to power are also high. No sex reactions are high. Her reactions suggest that she may have a father-fixation, which would also account for her dislike of her stepmother. He certainly appears in a large number of her associations. It was very noticeable that several long reaction-times had no corresponding galvanic reaction, as, for example, to "thin."

Ass		ction-1					
North		Wales*		5		4	S.R. = 13,000.
Blood		Faint		6		1·6	1,000  ohms = 1.9.
Kiss .		Woe		2		•8	·
Moon.		Night		5			
Thin .		Nil	•	75	•	• 2	
Mother		Dead		3		8 · o	

\* Went to see wounded father here.

Case 7.—A single woman of 24, suffering from early dementia præcox with aural hallucinations, ideas of reference, obsessive doubts and subjective feelings of deficiency. She had attempted suicide recently. Her reactions were somewhat difficult to interpret, as she allowed her attention to wander very much and at no time during experiment was she relaxed. This caused frequent variations in her S.R.; frequently large galvanometric deflections occurred, and these invariably turned out to be due to her thinking of one or other of her symptoms. This rendered the relative extent of the deflections recorded fallacious, but brought out very well her increased emotivity. Her fear complex was prominent and was closely connected with religion. Her sex complex was not so prominent. A large number of associations having little or no reaction demonstrated that her affective state was one not so much of a general increase of affectivity as an increase to certain complexes.

A:	soc	iatio	ons.			ction-t		Galvanic deflection.	
Love .			Beautiful			12		• 1	S.R. = 16,000.
Ask .	•	•	And ye shall receive	•	•	15	•	2 · 1	$t,000 \text{ ohms} = t \cdot 2.$
CLOAK			Covering.			3		_	
Doubt			Fearful .			6		o·8	
Back .			Straight .			5			
Church			God's house			3		6·o	

CASE 8.—A single woman of 39, with symptoms of an anxiety neurosis. Has had an attack of melancholia with attempt at suicide at 21, and has not been well since. Had operation for thyroid cyst in 1919. Depressed; anergic; attention apt to wander; easily fatigued; sense of inferiority, but very proud. States she hated mother. Both parents dead. She has been psycho-analysed and a father-fixation complex diagnosed as causal of her neurosis. Experiment suggested that her father-fixation was a figment of the analyst's mind. She thinks her attempted suicide an unforgiveable sin, and becomes very agitated when the subject is discussed with large galvanometer deflections. Her reaction-times had a close correspondence to her galvanic reactions. Test showed increased emotivity.

Associations		Reaction-time in seconds.					
MAN F	ather .			3		• 2	S.R. = 12,000.
Cold F	roid .			10		• 2	$t,000 \text{ ohms} = t \cdot 6.$
Church V	Vorship*			6		I · 4	
Back F	ast .			12		• 2	
MADNESS . T	hing beyond all reach	•	•	35	•	1 · 8	
Salute C	fficer .	•		4		•2	

• She has devoted her life to church work to try and gain forgiveness for her attempted suicide.

CASE 9.—A single woman of 25. She had an hysterical paralysis of her left lcg in 1919, which was healed by "persuasion," after which patient developed terrifying dreams, which have continued. She is very depressed. In her dreams she sees her mother being tortured by the doctor who had operated on her in her fatal illness, and sometimes a second phase in which an attempt at rape by her father occurs. Some time prior to experiment she had undergone a course of hypnotic treatment. Under attempted hypnosis she had passed into a somnambulistic state with behaviour identical with that in her nightmares, squirming

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about and evidently witnessing the tortures of her mother. During this state she was awakened with difficulty and was quite inaccessible. Weekly performances usually succeeded in giving her a few nights free from nightmares. She states that her father used to come home intoxicated and rape her, but it is very probable that this is a pseudo-reminiscence.

She took a very long time to come back to normal after each reaction. Her reaction showed very marked increased affectivity; practically every word acted as a complex stimulator, and she volunteered the information that most of the words made her feel sad, by making her think of something sad before or after she had answered.

As this case seemed to be an undoubted case of hysteria from a clinical point of view, the increased emotivity is certainly unusual. The test was therefore repeated several times on different dates and always with the same result.

Associations,							Galvanic deflections.	
God .			Far away .		7		3.0	S.R. = 10,000.
Quick			In time		12		1.0	1,000  ohms = 1.8.
Blunt	•	•	Knife (thought attempted suicide when fact the knife was blue put her off)	le at	3	•	10.0	
Kiss .			A friend .		7	•	2.0	
Fat .		•	Nasty (she hates fa	t) .	5		0.4	
Winter	•	•	Cold	•	3	•	0.3	

CASE 10.—A single man of 35, with marked anxiety symptoms and various phobiæ. He shows much worry and shame over his habit of masturbation. He reacts to every word like the usual case of anxiety neurosis.

Associations.				Reaction-time Galvanic in seconds. deflection.						
Picture			Artist				1		٠6	S.R. = 13,000.
Sin .			Unlawful	۱.			3		1 . 2	1,000 ohms.=1.4.
Young			Man				2		-8	Cough $= \cdot 8$ .
Flower			Beauty		•		1		٠6	Rattle=1.4.
SHAME			Nil		•		7		2	
Round			World				I	•	•4	

#### CONCLUSIONS.

- 1. The galvanic reflex is an inevitable response, and, alone of all such responses which can be studied objectively, it is specific to "nocuous" stimuli. By virtue of this characteristic it becomes a most important objective method of investigation into the neuroses.
- 2. Reaction-times as obtained in word-association tests can be exceedingly misleading as "complex" indicators, but taken in conjunction with the galvanic reflex, simultaneously obtained, can give valuable information.
- 3. A study of the galvanic reflex suggests that the various neuroses are not definite entities but merely clinical syndromes.
- 4. Three types of affectivity which cannot be diagnosed clinically with any certainty are found in the neuroses:
  - (a) Increased affectivity.
  - (b) Diminished affectivity.
  - (c) Affectivity, otherwise normal, increased to special complexes.

- 5. The large majority of hysterics have diminished affectivity, and it is suggested that their symptoms are due to the failure of their diminished emotivity to act as the mainspring of their volition.
- 6. In anxiety neurotics increased emotivity is usually present, but there are many exceptions to this rule, and in my opinion these exceptions are very closely allied to, and might well be classed with, the hysterics. The symptoms of these patients with increased emotivity is due to their exaggerated emotional reactions making them attach undue importance to their experiences in accordance with their excessive emotions.
- 7. The affectivity varies in different cases of dementia præcox, but in the present series all hebephrenics showed increased affectivity.

Finally I wish to acknowledge with the deepest sense of obligation the kindness and encouragement I received during these investigations from Dr. Golla, the Director of the Pathological Laboratory at the Maudsley Hospital.

The Madness of Ajax, as conceived by Sophocles, Clinically Considered.\* By G. A. Auden, M.A., M.D.Cantab., D.Phil.Birm., F.R.C.P., School Medical Officer, City of Birmingham.

ONE of the points which strikes a careful reader of the tragedies of Sophocles is his vivid portrayal of physical and mental anguish. As a poet "who saw life steadily and saw it whole," he seems to have been especially interested in the problem of human suffering. In several of his seven extant plays, the tragedy centres round some mental conflict or physical infirmity, and in his presentation of the legends upon which he worked it is his evident intention to arouse the sympathy of the audience with the sufferer. In the Trachinia, for example, the depicted sufferings of Herakles, writhing in the torments of the robe of Nessus, given to him by his wife in the mistaken idea that it was a charm to regain his love, afford an extraordinarily accurate picture of acute physical suffering. again, the scene in the Œdipus tyrannus, in which the king appears on the stage self-blinded in remorse for his unwitting deed of infamy, is a poignant presentation of tragic suffering. But his Philoctetes perhaps affords the best example of the poet's humanity and sympathy with the sufferer, for the whole motif of this drama is the portrayal not only of severe physical agony, but also of the mental

<sup>\*</sup> A paper read at the Annual Meeting held in London, July 13, 1926.

torture of one who for ten weary years had been cruelly deprived of the solace of human companionship, yet found himself robbed and defrauded by those who had it in their power to rescue him.

I have elsewhere put forward the suggestion (Nature, January 6, 1910) that in his delineation of the sufferings of Philoctetes, Sophocles had in mind the course of an attack of malaria, although the legend compels him to attribute the symptoms which he describes to the uncured wound caused by the snake-bite at the shrine of Chryse.\* To those, therefore, who have become acquainted with the course of an attack of acute ague, either during the Great War or by experience in the treatment of general paralysis of the insane by an artificially induced malaria, this play should make a special appeal.

In this play, just when he is about to accompany Neoptolemos to the Greek ships, Philoctetes is suddenly seized with an attack which is ushered in by shivering and malaise (line 730). He recognizes in this the prodromal symptoms of what he describes as a recurrent malady (line 758: ηκει γαρ αυτη διά γρόνου). symptoms become increasingly acute, until they reach a climax (line 790). Then he is able to foretell, from his previous experience, that the worst is over (line 808), and says that the attack will pass away during the sleep which always supervenes. Later, when Philoctetes falls asleep, Neoptolemos directs the attention of the sailors, who form the chorus, to the profuse perspiration which bathes his body (line 823). Here the periodicity, the sudden invasion and ingravescence of the symptoms, the crisis followed by sleep with sweating and a passing feebleness on waking (line 880) present a clinical picture the vividness of which seems to show that it must be based upon actual clinical experience.

If this interest in clinical details which is found in his tragedies stood alone, it might be taken merely as affording an illustration of his dramatic realism. We have, however, definite historical evidence that Sophocles was in a very special way associated with the cult of the hero-physician, Asklepios. During the fifth century there was in Greece a marked tendency to heroize the notable dead, and Sophocles shared with Hesiod and Pindar the distinction of admission to the rank of hero after death. He received the hieratic title of Dexion, i.e., "The Receiver." Farnell (1) writes: "It may have been that the heroic status was first awarded him, not as a great tragedian, but as the apostle of a new cult: for it was he who was mainly instrumental in introducing the worship of Asklepios into Athens from Epidaurus in the later years of his life."

<sup>\*</sup> This suggestion was accepted by Osler and Allbutt (cp. Greck Medicine in Rome, p. 335). According to W. L. Jones (Malaria and Greek History, p. 39), it is Sophocles who makes the first specific reference to malaria in Attic literature (Fragment 466): πρυμόν φίρων γνάθοισιν ἐξ ἀμφημέρου.

He derived his title "Dexion" from the fact that he was regarded as the official "host" of Asklepios.\* It may be remarked that Sophocles represents Hercules at the end of the play as promising that Asklepios himself shall finally cure Philocettes (line 1437). this connection Masqueray writes in the introduction to his edition of Sophocles: ". . . Asclépios pour lequel Sophocle eut une dévotion particulière. Il avait composé en son honneur un péan qui se chantait encore sous l'empire. C'est pourquoi, en 421, lorsque les Atheniens firent venir d'Epidaure la statue d'Asclépios, Sophocle se chargea d'héberger cette statue: ce qui lui valut, après sa mort d'être honoré sous le nom de Δεξίων." It may be remarked that this incident took place in the short period of peace during the Peloponnesian War, when the devastation of Athens by plague during the siege was fresh in the memory of everyone.

Some evidence of this interest in the more practical side of medicine seems to be revealed in his plays by his choice of a metaphor or by the turn of a phrase.† The oft-quoted lines (580-1) from the Ajax, "It is not for a skilful surgeon to whine charms over a sore that calls for the knife," seem to illustrate this point. A similar or comparable idea is to be found in the cry of Herakles (Trachinia, line 1000): "Where is the cunning surgeon, except Zeus alone, that shall soothe this bane" [τίς ὁ χειροτέχνης ἰατορίας].

His description ‡ of the pestilence which visited Thebes in punishment for harbouring the unwittingly incestuous Œdipus bespeaks a knowledge founded on experience. The date of the play is unknown, but it is well within the bounds of possibility that Sophocles had known the ravages of plague in the stricken city of Athens in the disastrous year B.C. 430, when one quarter of the inhabitants are said to have died. Or again the address of Œdipus to Theseus in the Edipus Coloneus appears to contain a definite reference to the philosophy of Opposites developed by Pythagoras, Herakleitos and Empedocles which exercised such a powerful influence on Hippocratic teaching—wet and dry, cold and hot, sweet and bitter, sleeping and waking, life and death, day and night, love and strife, each passing into the other in an endless cycle of change. this speech Œdipus declaims thus: " Earth's strength decays, and the strength of the body; faith dies, distrust is born; and the same spirit is never stedfast among friends or betwixt city and city; for, be it soon or be it late, men find sweet turn to bitter, and then once more to love. . . . Time in his untold course gives birth

<sup>\*</sup> Etym. Mag.: άπὸ τῆς του 'Ασκληπιου διξιώσεως. † cp. (Edipus Coloneus, 437: ὅτ ἦδη τπᾶς ὁ μόχθος ἦν πέπων, where πέπων is used in its clinical sense of the softening (πέψις) of an abscess or the subsidence of inflammation.

<sup>‡</sup> Œdipus Tyr., 170-180.

to days and nights untold. . . . When my slumbering and buried corpse, cold in death, shall one day drink their warm blood."\* This last phrase and the contrast of the warm blood of life to the coldness of death, it seems a reasonable assumption to refer to the Hippocratic theory of the Θερμὸν ἔμφυτον or innate heat which supported life, and the evaporation of which caused death.†

With these facts in view the characterization of the madness of Ajax acquires a special interest for those who are cognizant of the various types of mental disorder. The behaviour of Ajax is portrayed with such psychological insight that it has every appearance of being based upon actual experience of insanity. In his treatment of the legend Sophocles was bound by two main facts, *i.e.*, that his eponymous hero was disappointed at the award of the arms of the dead Achilles to his rival Odysseus, and that in his resentment he committed suicide "about dawn." It is doubtful whether the madness which led to his slaughter of the cattle was part of the original legend, for there is no mention of it in the Homeric story.

The course of events as given in the play may be summarized as follows: Ajax is represented as a giant in stature who ever stood as a tower of strength to the Greek armies before Troy, especially when they were hard pressed, but one who was apt to betray a certain boastfulness and independence. The award of the arms to Odysseus he believes to be due to the machinations of his colleagues Agamemnon and Menelaus, who have, he thinks, treated him as subordinate to themselves, and not as an equal who holds an independent command. Accordingly, he has withdrawn himself from active fighting and, becoming moody, has nursed his feelings of injustice and suspicion. His increasing moodiness arouses the anxiety of his wife, Tecmessa, who removes their little son to a place of safety. Finally his resentment reaches a climax, and in the middle of the night ("when the evening lamps no longer burned," line 285) he suddenly seizes his sword and makes for the door of his tent. His wife tries to calm him by telling him that the whole camp is asleep and that no trumpet has sounded an alarm. Whereupon he turns on her angrily and tells her to hold her tongue (line 293) and disappears through the door. Some time later he returns with a miscellaneous collection of captives-bulls, sheep and shepherd-dogs (207), which he proceeds to butcher in the tent, running amok amongst them with his sword. When this has gone on for some time he suddenly darts out into the darkness and carries

<sup>\*</sup> Œdipus Coloneus, line 420 et seq. (Jebb's translation).

<sup>†</sup> Sophocles(²) makes the same contrast between hot and cold in Antigone 88: Θερμήν ἐπὶ ψυχρῦισι καρδίαν έχεις—" Thou hast a hot heart for cold deeds."

on a conversation with an imaginary person (orala rev), line 301), telling how he has been destroying his enemies, and how he holds his hated rival Odysseus tied up in the tent and destined for special torture. Such is the account of the conduct of Ajax which Tecmessa gives to the band of perplexed Salaminian sailors who stand on the stage before the tent. It is, of course, possible that in relating this last incident of a hallucinatory conversation Tecmessa may be meant by the poet to be understood by the audience in the theatre to be giving her version of the incident in the opening scene of the play, where Athene calls forth Ajax from his tent in order that Odysseus may look upon the humiliation of one who has been guilty of lack of reverence towards her and of impiety to the gods.

But even if this is a true interpretation of Tecmessa's words the complete disorientation of Ajax is apparent, for in his attitude towards the goddess he shows a total failure to understand the true position, and, so far from recognizing her as a deity whom he has deeply offended and who is the prime source of his troubles. he claims her as his ally and accomplice in his bloody deeds. He invites her (line 117) to enter his tent and help him in the torture of Odysseus, whom he believes he has bound within. By degrees the motor excitement lessens, the disorientation passes off, and there comes a gradual recognition of the nature of his acts and the consequences which they will entail. This is succeeded by a deep depression in which he sits with his head in his hands (line 310), breaking out into groans from time to time—a condition which his wife remarks is quite unlike his usual attitude of composure (line 322). She leaves him in this state while she goes outside to tell the story outlined above to his sailors, who form the chorus, to whom she says that even now he is not quite rational (θολερφ κειται χειμώνι νοσήσας, line 205). Ajax has meanwhile emerged from his tent, and though to the chorus he seems to be in his right mind (auno poveir foiker, line 344) he later on refuses food and drink, until finally a blasphemous remark and a request that they should kill him causes them to revise their opinion, the more so when, in answer to a gentle appeal from his wife, he turns upon her and angrily tells her to go to the devil. His friends try to pacify him without much success, and his rapid changes of mood betray an insane lack of balance, especially when he peremptorily orders them to close behind him the doors of his tent, into which he again enters. After the lapse of a little time, however, he reappears and shows a completely changed attitude of mind. He is apparently no longer suicidal and seems to accept the position, stating that it is his intention to seek material and spiritual purgation for his deeds by a ceremonial washing-away of the dried blood and filth

with which his maniacal outburst of the previous night has covered him. He feels a genuine inward change and that he has learnt the lesson of wisdom (line 677). For the future he will reverence the gods and live in amity with his former enemies. His attitude towards his wife is now one of gentle tenderness, though he shows an unreasoning irritability at the seeming dilatoriness of the servant who has been sent to bring his little son to him from the place to which his mother had sent him for safety. To my mind it is the poet's intention in this scene to portray a real and genuine change of mental outlook, and not a wily and hypocritical assumption of humility intended to mislead his friends. Such an interpretation seems to be totally foreign to the dramatic art of Sophocles.

The chorus certainly accept the words of Ajax at their face value, and the metrical measures in which they give play to their relief marks their joy at his recovery of mental equilibrium ('Aιας λαθίπονος πάλιν, line 710).

Some twelve hours may now be supposed to elapse between this scene and the next. With the oncoming of night another fit of depression has seized Ajax, who is now disclosed in a lonely spot by the seashore at a time when "the night is at odds with the morning."\* With a prayer to the Gods, against whom he confesses that he has committed the unpardonable sin ( avūv & atimoc woe πρόκειμαι), he falls upon his sword and dies by his own hand. Meanwhile the sailors, having noted his absence from the tent, search in the darkness, calling to one another in the dim light of their failure to find their lost leader, till a cry from Tecmessa calls them to the spot where his body lies, the blood still welling from his nostrils and from the wound in his chest. Dawn is just breaking and death has only recently taken place (ἀρτίως νεοσφαγής, line 898). In the time chosen for the suicide Sophocles is following the legendary story, but this itself may well be based upon the fact. so well attested by experience, that it is in the early hours of the morning, when mental depression is at its most acute phase, that suicide is most frequent.

From this analysis of the story of the madness of Ajax it will be recognized that the description of the rapidly varying emotional states, the persecutory ideas, the hallucinatory phase, with complete disorientation, the maniacal outburst followed by a depression which culminated in suicide, forms an organic whole and gives a clinical picture which is true to experience.†

<sup>\*</sup> cp. Pindar, όψία ἐν νυκτί, Isthm. iv. 59.

<sup>†</sup> In a recent study which has come to my notice since the above was written (Madness in Ancient Literature, Wagner Sohn, Weimar, 1924), Dr. O'Brien Moore writes (p. 112): "One cannot sufficiently admire Sophocles' psychological acuteness and genuine insight... he is interested in madness for its own sake,

How true is the picture thus presented by Sophocles may be gauged by a comparison with a description of acute confusional insanity taken from a modern text-book chosen at random.(3)

"At first one does not notice anything wrong with the patient; he begins to be irritated or anxious, then raves and storms against persons and things about him. The paroxysm is sometimes set free by any occasion—an exchange of words, an attempt to direct, the intervention of a policeman. . . . It also happens that at first these persons go to sleep and then wake up in a rage, or when they are awakened feel themselves threatened and seize a knife. Under the influence of illusions and hallucinations of sight, and more rarely of hearing, the conditions of the surroundings are mistaken. The patients are usually markedly disoriented, showing 'anxious phantastic fears,' and are dominated by terrifying delusions of reference."

But there is another point of interest which appears to have been in the mind of Sophocles in presenting his play to an Athenian audience, i.e., the still insistent problem of criminal responsibility. To the acute-minded Athenian, accustomed as he was to serve as a juryman in all kinds of criminal and civil cases, the psychological aspects of legal administration made, without doubt, a special appeal. Moreover, it must be remembered that "this Ajax," who is exhibited on the stage as a fatuous maniac, "is the same to whom the Athenian spectators, like their fathers before them, had been taught to pay divine honours; the Ajax whose statue they were accustomed to see in the market-place among those of the ten heroes from whom the Attic tribes derived their names; the ancestor of two families with which the most illustrious Athenians were proud to be linked. . . . In following the progress of the play

as an interesting and pathetic psychological phenomenon. He realizes that the madman lives in a world which does not correspond with any external reality, natural or supernatural—a world constructed by his own mind from false materials. Whether he was conscious of it or not, Sophocles has clearly differentiated the materials of knowledge supplied by sense perception and the interpretation of these materials by a reasoning faculty. The root of Ajax's madness is his false apprehension of the external world through faulty perception, a faulty perception which Sophocles explains as directly due to Athene. With these faulty materials, in the same way as the sane, Ajax constructs a world of his own, but this world has no correspondence with reality, and when his senses once more function correctly the whole false structure collapses. Sophocles' penetration in this description of delusional insanity is amazing. Psychologically Sophocles' explanation of Ajax's insanity is much superior to any exposition of the matter that Aristotle could have developed, whose physiological explanation may account for, but naturally does not explain, the psychological side of madness. Sophocles uses the supernatural only for his beginning, starting the chain of causation abruptly with Athene . . . and thereafter allows the rest to unfold naturally within Ajax's mind."

it would be impossible for Athenians to think of him merely as a great warrior whose honour had been restored by his resolve to die. They would necessarily think of him also as a sacred 'hero' in the religious sense of the word."(4)

If, without bathos, we may be allowed to place the hero of the play in the setting of a modern Law Court, indicted for cattlemaiming, we may imagine the judge putting the question to the physician called by the defence, in the terms of the McNaughton rules: "Was the prisoner labouring under such a defect of reason from disease of the mind that he did not know the nature and quality of the act with which he is charged?" We will call as a witness Podalirius, the physician who accompanied the Greek expeditionary force, who will detail (according to a surviving fragment of the tragic poet Arctinus) how he had noticed, since the award of the arms, a change in the demeanour of the prisoner, a depression weighing down his spirits, accompanied by a notable alteration in his facial expression (διματά τ' αστράπτοντα βαρυνόμενόν τε νόημα). He will doubtless admit the fact of the cattle-maining, but would urge that the prisoner acted under an uncontrollable impulse (directly due to a deprivation of judgment caused by the goddess Athene—an actus Dei), and that in so acting he was labouring under a defect of reason whereby he did not know the nature and quality of the act in maining and slaughtering the cattle.

There is no reasonable doubt that a jury of Athenians would appreciate this point, and that they would return a verdict in accordance with the medical evidence.

But the Ajar is not the only play of Sophocles in which insanity is the motif, although unfortunately his The Mad Odysseus has not survived. We have, moreover, no information as to the poet's treatment of the legend, which told how Odysseus feigned madness when summoned to join the expedition against Troy.

It may, perhaps, be urged that Sophocles is not alone of ancient writers to deal with madness as a motif in his plays, and that Euripedes also introduces a madman into his play, The Mad Hercules. This is certainly true, but the difference in treatment is indeed great, as might be expected from the different temperamental outlooks of the two poets. Life Sophocles, Euripedes was limited by the conditions imposed by the legend which formed the framework of his play, but he is much more concerned with his rationalist conceptions of the religious problems involved than with clinical details. The madness of Hercules is a purely conventional description, and Lyssa, the demon of madness, is introduced as a Deus ex machina to bring it about. Just as he is about to make a purificatory sacrifice for the murder of Lycus, Hercules is suddenly

seized with an insane fury in which he attacks and kills his wife and three children. He is then "knocked out" by a blow on the chest from a piece of rock thrown by Pallas Athene herself and promptly falls into a deep sleep, a result which cannot be said to coincide with actual experience. However, he soon awakes and learns with surprise that the bloody havoc which he sees around him has been wrought by his own hand. Though he talks about the disgrace, and hints at suicide, he is soon reassured by the coming of Theseus, who promises him a comfortable home and the honours due to a great hero.

This comparison must not, however, be taken as intended to belittle Euripides as an acute psychological observer, but his extant plays reveal him as interested from the standpoint of a student of human behaviour rather than from that of a physician. He is certainly more attracted than is Sophocles to the psychology of sex-problems, and had he lived at the present day it is likely that he would have been an ardent disciple of Freud. Thus, as Prof. Dodds has pointed out (5), the dialogues between Phædra and the old nurse in the Hippolytus show a very remarkable understanding of the phenomena associated with sex-repression. Similarly, in the Andromache, he puts into the mouth of the heroine statements concerning woman's attitude to sex problems which have a strangely modern ring.\* Again, although his Trojan Women is primarily a pacifist play, yet the tragic motif which underlies it throughout is the various attitudes of mind with which the captive women approach their fate of slavery and concubinage. Furthermore in the Bacchæ he shows a rare appreciation of the re-integration of a split personality in the conduct of Agave (Bacchæ, 1264-1284). She appears on the stage bearing in her hands the head of her son Pentheus, whom she and the crowd of frenzied Bacchanalian women have torn limb from limb (lines 1200 et seq.). She calls for her father to see her spoils of the hunt on the mountain side, and naïvely asks the whereabouts of her son that he may nail to the beam end of the palace the lion's head which she holds in her hands. The horror shown by her father Cadmus at first fills her with surprise, which gradually, by his questioning, changes to a recognition of the real nature of the gory mass she is clasping. He "begins by making trial of her outward senses; he finds that her sense of sight is becoming true again, as her clouded vision passes away and the

<sup>\*</sup> cp. Andromache, 210 et seq., esp. 220: ἀρσίνων νόσον ταύτην νοσδυμεν, ἀλλὰ προύστημεν καλῶς—" We women suffer this malady of men, but we are better at repression. It is interesting in this connection to note that no less than 13 out of he 18 extant plays of Euripedes (omitting the Rhesus, which is probably wrongly attributed to him) bear as titles either the names of women or their plural equivalents.

sky seems brighter than before (1267). He next leads her on, step by step, till her inward sense returns. She is at last conscious that the head she is holding is that of her own son." (6) Thus, by testing her vision, her hearing, and probing her mental orientation, he gradually brings about a re-integration of her personality. It is, of course, highly probable that Euripedes had himself experienced how readily the Greek women, released for the time being from the confinement and narrowness of their home-life, became worked up by mass-suggestion to a state of hysterical excitement and exaltation, just as in the fourteenth and fifteenth centuries the dancing mania seized the folk of Germany and the Netherlands.

A comparison with the delineations of madness in the plays of Shakespeare naturally presents itself, but for accuracy of detail and clinical insight the verdict seems to be in favour of the Greek tragedian, although Brandes (7) writes: "Shakespeare's representations of madness surpass all those of other poets. Alienists are full of admiration for the accuracy of the symptoms in Lear and Ophelia." (8) It is somewhat remarkable that Horton Smith (9), in his dissertation, Sophocles and Shakespeare, makes no comparison of the portraiture of madness by these poets, but incidentally points out how the astute craftiness of Odysseus acts as a foil and contrast to the impulsiveness of Ajax, just as Creon serves as a foil to Edipus. This as a general statement is perfectly true, but does not carry us very far.

However this may be, the thesis which has been maintained in this paper may perhaps give us some grounds for claiming Sophocles as one of the long line of physician-poets, which includes Akenside, Crabbe, Goldsmith, Wendell Holmes, Keats and Macrae, and is worthily represented by our present Poet Laureate.

<sup>(1)</sup> Farnell, Greek Hero Cults, p. 364.—(2) Harrison, Prolegomena to Greek Religion, pp. 345-6. See also Rouse, Greek Votive Offerings, p. 6.—(3) Bleuler, Text-book of Psychiatry, 1923 (translation by A. A. Brill).—(4) Jebb, Sophocles: The Ajax, Introduction, p. xxx.—(5) Dodds, Classical Review, August, 1925, p. 102.—(6) Sandys, Bacchæ, notes.—(7) Brandes, William Shakespeare (translation, W. Archer), p. 93.—(8) cp. J. Bucknill, M.D., The Madfolk of Shakespeare, 1860.—(7) "Ars Tragica Sophoclea cum Shakesperiana comparata," Members' Prize Latin Essay, University of Cambridge, 1894.

Some Symptoms Referable to the Basal Ganglia occurring in Dementia Præcox and Epidemic Encephalitis.(1) FARRAN-RIDGE, M.B., Ch.M., D.P.M., Assistant Medical Officer, County Mental Hospital, Stafford.

In the study of nervous and mental diseases, it is a commonplace observation that the same symptoms are repeatedly met with in ætiologically unrelated and widely differing conditions.

The explanation lies in the fact that morbid processes in the nervous system meet everywhere with preformed mechanisms, and that interference with any particular mechanism brings about essentially the same functional disturbance whatever the nature of the morbid process concerned.

It is therefore not surprising to find some of the symptoms of many different psychoses reproduced by epidemic encephalitis-a disease in which the virus may attack any part of the brain.

Among all the psychoses whose symptoms may be thus simulated by epidemic encephalitis, dementia præcox occupies the foremost place; in fact the semiological resemblance between the two diseases is in some cases so striking as to give rise to real difficulty in differential diagnosis.

It is suggested that this special resemblance is accounted for by the fact that just as in epidemic encephalitis the virus tends to attack selectively, or at least predominantly, the basal ganglia, so in dementia præcox, at any rate in the katatonic variety, the main incidence of the disease process tends to fall on the same portion of the brain.

An effort will be made to support the above view in the present paper, which deals with a few of the very many symptoms of dementia præcox which can be attributed with a high degree of probability to lesions or functional disturbances in the region of the basal ganglia.

#### WASTING AND OBESITY.

In dementia præcox in the acute stage there is normally a very considerable fall in the body-weight, which sometimes proceeds to extreme emaciation in spite of abundant nourishment. Later, without any change in their diet or environment, the patients put on flesh in an extraordinary way, so that in a short time they present an over-nourished, turgid appearance.

One is reminded of the similar fluctuations in body-weight which

(1) A paper read at the Annual Meeting held in London, July 14, 1926.

occur in general paralysis of the insane, the emaciation of the first stage and the bloated fatness of the second stage.

One is also reminded of the nutritional changes which occur in epidemic encephalitis, the extreme wasting sometimes observed during the acute stage, and the striking tendency to grow fat shown by many patients during the chronic stage.

I recently had the opportunity of seeing, through the courtesy of Dr. Craig, of Stoke, a man suffering from post-encephalitic Parkinsonism, who in a short time had lost over three stone in weight in spite of taking plenty of food. This patient showed a curious thalamic intolerance to the smell of tobacco smoke, although previous to his illness he had been a heavy smoker.

That three such ætiologically unrelated diseases as dementia præcox, general paralysis and epidemic encephalitis should so frequently show wasting in the acute stage followed by obesity in the chronic stage rather points to injury to the pituitary gland as the common factor. That the gland should be damaged by the inflammatory lesions of general paralysis and encephalitis is easily understood, and Mott's (I) work on the pituitary changes in dementia præcox may explain the nutritional disturbances in that disease as well.

Further, in cases of encephalitic adiposity, hypophyseal involvement is often indicated by other signs such as polydipsia, polyuria, and menstrual disturbances, while the amenorrhœa, which is constantly met with in female precocious dements during the fat stage, points in the same direction.

Prof. Leschke (2), however, in discussing the causation of dystrophia-adiposo-genitalis, states that all the classical phenomena of Fröhlich's syndrome can be experimentally reproduced by mere lesion of the diencephalon between the tuber cinereum and the corpora mamillaria.

In dementia præcox and in chronic epidemic encephalitis, there are so many symptoms which can be referred with a high degree of probability to a disturbance of the hypothalamic sympathetic centres that it seems likely that the disorders of metabolism are nervous rather than glandular in origin, although the pituitary body may be the mechanism through which the hypothalamus acts.

In some cases of dementia præcox, the loss of weight, which normally occurs during the acute stage, is not followed by a fat stage, or the fat stage is itself succeeded sooner or later by a second period of general muscular wasting, which is slowly progressive, and which may proceed to extreme emaciation in spite of the patients resting in bed and taking abundant nourishment. In these cases the wasting is always associated with Parkinsonism, and is

accompanied by mutism, difficulty in mastication and deglutition, ædema of the feet and loss of sphincter control.

One is irresistibly reminded of the similar muscular wasting which takes place in certain cases of encephalitic Parkinsonism, which have been well described by Lévy (3) under the heading of "forme cachectisante du syndrome Parkinsonien."

It is further instructive to recall how cases of true paralysis agitans in the terminal stage become extremely thin and drift into a marasmic condition associated with ædema of the feet and sphincter troubles.

The cause of this strange wasting and cachexia is unknown, and one can only hazard the speculation that it is in some way connected with disturbance of the hypothalamic sympathetic centres which dominate the sympathetic nervous system as a whole.

References.—(1) Mott, F. W., and Robertson, I. M., "Histological Examination of the Pituitary Gland in 110 Asylum and Hospital Cases," Journ. Ment. Sci., lxix, No. 286, pp. 296-314.—(2) Leschke, "Metabolism and the Sympathetic Nervous System," Brit. Med. Journ., May 2, 1925, pp. 838-839.—(3) Lévy, G., Les manifestations tardives de l'encéphalite épidemique, Paris, 1925, pp. 97-105.

# FLUTTERING OF THE EYELIDS (BLEPHAROCLONUS).

In certain cases of dementia præcox a rapid fluttering or trembling of the upper eyelids, a kind of blepharoclonus, can often be observed. This fluttering is most frequently noted during states of stupor; it disappears during sleep, but may persist most of the time the patient is awake for weeks or months. In many patients an indication of the same phenomenon can be traced in an abnormal frequency of the ordinary blinking movements, coming on in attacks. Occasionally I have observed the upper eyelid of one eye to flicker at a faster rate than its fellow of the opposite side.

A patient at present under my care lies in bed all day flat on his back, rigid and motionless except for an incessant flickering of the half-closed eyelids. He is resistive and negativistic whenever anything has to be done for him. He does not reply to questions, but keeps up sotto voce a continuous muttering or murmuring.

In a few cases fluttering of the eyelids is associated with a strong conjugate upward rotation of the eyeballs. The patients lie for hours at a stretch with their eyeballs turned up until only the sclerotics are visible, while the eyelids show a constant rapid flickering.

Trembling of the eyelids has been noted by Brissaud-Meige (I) and by Carrayou (2) in cases of paralysis agitans, and Oppenheim once had a patient suffering from the same disease in whom the trembling was so strong as to interfere with ophthalmoscopic examination.

Prof. A. J. Hall (3) states in his book on epidemic encephalitis that in a considerable number of Parkinsonian cases there is a curious disorder of the oculo-palpebral or blinking movements of the eyelids, which presents many interesting features. At irregular intervals, sometimes frequent and at others less so, the eyelids close, apparently in the ordinary act of blinking, but instead of the upper lids at once rising again, they remain closed for an appreciable time, and when raised there is a fluttering movement, as if there were some difficulty to be overcome before it could be accomplished.

Papastratigakis (4) describes the case of a young man of 20 suffering from epidemic encephalitis, who used to complain that he couldn't open his eyes easily and that the lids would contract as soon as he closed them. The spasms sometimes alternated with a rapid trembling of the eyelids. This author thinks that the condition is dependent on a lesion of the corpus striatum.

I recently saw at Stoke two cases of chronic epidemic encephalitis showing fluttering of the eyelids identical in every way with that observed in dementia præcox.

A female encephalitic patient, at present under my observation, suffers from remarkable attacks, which come on rhythmically every three days. In these attacks there is a violent conjugate movement upward and to the left of the eyeballs, which remain fixed in this abnormal position for hours at a time in spite of the strongest voluntary efforts on the part of the patient to turn them down. With the upward rotation of the eyeballs is associated a rapid fluttering of the upper eyelids. At the same time there sets in a powerful tremor of the head and the whole of the body, and the patient is thrown into a state of intense anxiety which persists as long as the eyeballs remain turned up.

Mdlle. Lévy (5) describes the somewhat similar case of a patient who suffered at intervals from clonic spasms of the eyeball and of the upper eyelid. Blepharospasm and blepharoclonus are occasionally met with in hysteria, and were not infrequently observed in hysterical soldiers during the war.

What, then, is the situation of the lesion which brings about fluttering of the eyelids?

The absence in cases of dementia præcox of any evidence of nuclear involvement of the nerves supplying the external eye muscles tends to exclude the mesencephalon, while the association of trembling of the eyelids with Parkinsonism and with stupor, and the occurrence of the same symptom in paralysis agitans and in hysteria, are all facts which speak in favour of the localization of the lesion in the basal ganglia.

In conclusion, it is suggested that the conjugate upward rotation

of the eyeballs, which is sometimes observed in dementia præcox and epidemic encephalitis, may be related, as far as the localization of the lesion is concerned, to the paralysis of the vertical associated movements of the eyes (Parinaud's syndrome) which has been noted in certain cases of epidemic encephalitis.

References.—(1) Brissaud-Meige, "Maladie de Parkinson; Tremblement des Paupières; troubles de la Déglutition; début de l'affection par des phenomènes hémiparétiques doloureux," Rev. Neurol., 1905, pp. 746-747.—(2) Carrayou, E., "Étude clinique et anatomo-pathologique sur la maladie de Parkinson," Thèse de Paris, No. 210, 1902-3.—(3) Hall, A. J., Epidemic Encephalitis, London, 1924, pp. 130-131.—(4) Papastratigakis, "Spasme palpébral chez un Parkinsonien post-encéphalitique," Rev. Neurol., 1922, pp. 1019-20.—(5) Lévy, G., Les manifestations tardives de l'encéphalite épidémique, Paris, 1925, pp. 56-58.

### Pruriginous Phenomena.

Many precocious dements develop the troublesome habit of constantly rubbing, picking or scratching themselves. Some will rub a particular spot on their scalp until they create a bald patch, or a circumscribed area of skin on the face until it becomes raw and excoriated; others will nip little pieces out of their skin until they present a veritable hen-pecked appearance.

In some patients the urge to scratch is so imperative that nothing but mechanical restraint will prevent them from doing so. A similar tendency to rub, scratch or pick themselves is often observed in general paralytics, in epileptic imbeciles and in certain presentle patients who show a semiological resemblance to precocious dements.

The same symptom, under the name of "tic de grattage," has been described in many cases of epidemic encephalitis. Mdlle. Lévy (1) mentions the frequent occurrence in epidemic encephalitis of pruriginous manifestations which may be very localized and tenacious, and quotes an observation of M. Duvernay (2), who had two patients who showed pruriginous phenomena. One of them had an irresistible need to rub the periphery of the different orifices of the body until blood came: the eyes, which became red and swollen, the nose, into which he succeeded in inserting his thumb, the ears, which he made bleed, the anus, that was found one day to be dilated to the size of the fist, the lips, that he lacerated, and the mouth, from which he extracted two teeth. The other patient did not suffer from actual itching, but rather a psychic need to scratch so insistent that he asked to have his hands tied up.

There can be no doubt that in all such cases, whether in dementia præcox or in epidemic encephalitis, we are dealing with abnormal sensations of thalamic origin.

References.—(1) Lévy, G., Les manifestations tardives de l'encéphalite épidémique, Paris, 1925, pp. 174-175.—(2) Duvernay, "Séquelles d'encéphalite épidémique," Soc. Méd. des Hôp. de Lyon, 8 juin, 1920.

## CHEWING MOVEMENTS.

Precocious dements who exhibit persistent chewing movements are by no means uncommon. Such patients can usually be seen chewing away softly most of the day as if they had a plug of tobacco in their mouths. Others grind their teeth forcibly. I recall one patient in particular whose front teeth were greatly worn down from the incessant grinding movements, which he used to keep up for hours at a stretch.

I have observed the same symptom in general paralysis and in certain involutional psychoses, while similar "mouvements de mâchonnement" are often seen in cases of epidemic encephalitis, and are, as Mdlle. Lévy points out, very frequent in all forms of encephalitis. It is significant, too, that the tremor of paralysis agitans is sometimes localized in the lower jaw.

Goldstein (I) states that he has observed attacks of teeth-grinding in cases of pseudo-bulbar paralysis, and this observation is important, as there can be no doubt that lesions of the basal ganglia, especially of the lenticular nuclei, play an important part in the production of the symptom-complex called pseudo-bulbar paralysis.

Precocious dements often indulge in short spells of teeth-clenching for no apparent reason, and quite apart from any negativistic closing of the mouth to avoid being fed.

In this connection it should be remembered that trismus is frequently met with in epidemic encephalitis and also occurs in hysteria.

Reference.—(1) Goldstein, Oppenheim's Lehrbuch der Nervenkrankheiten (Siebente Auflage), p. 1628.

# GREASY FACE (SALBENGESICHT, VISAGE HUILEUX).

I have long been impressed by the frequency with which an abnormally greasy condition of the skin of the face, especially of the forehead and sides of the nose, is met with in dementia præcox, but it is only since I became aware of the frequent occurrence of the same phenomenon in epidemic encephalitis that I have paid systematic attention to it. The seborrhæa is usually not constant, but tends to come on in attacks, and is most often noted during states of stupor. In one of my patients recently the development of extreme greasiness of the skin of the face preceded an impulsive outbreak.

Cohn (I) was the first to report the frequent occurrence of greasy face (salbengesicht) in cases of epidemic encephalitis. Stern (2) noticed the same symptom in 16 of his encephalitic patients, and

considered that the condition was to be attributed to an increased secretion of the sebaceous glands, and possibly also to an increased œdematous infiltration of the skin of the face. He suggested that greasy face might be connected with the importance of the corpus striatum for the sympathetic and para-sympathetic vegetative functions.

Sarbo (3) in one case, in which the symptoms of paralysis agitans, katatonia and greasy face were combined, was able to demonstrate lesions in the lenticular nuclei. Hinds Howell (4), Wimmer (5), Stiefler (6) and others record the frequent occurrence of "greasy face" in encephalitic Parkinsonism.

It has been my experience that a considerable number of normal persons tend to develop a greasy condition of the skin of the face in connection with worry or emotional stress.

The conditions of occurrence of greasy face in dementia præcox, its association with Parkinsonism, with stupor and with flushing of the face all tend to show that the hypersecretion of the sebaceous glands is in some way connected with disturbance of the sympathetic centres in the basal ganglia.

Greasy face occurs very frequently in general paralysis, especially during the fat second stage, and is no doubt in that disease also an expression of central vegetative disorders.

References.—(1) Cohn, T., "Encephalitis ohne Lethargie während der Grippeepidemie," Neurol. Col., 1920, pp. 260-264.—(2) Stern, F., "Über das 'Salbengesicht' bei epidem. Encephalitis," ibid., 1921, pp. 64-67.—(3) Sarbo, A. von,
"Ein Fall von diagnostizierter und durch die Section bestätigter Encephalitis der
Linsenkerne," ibid., 1920, pp. 498-503.—(4) Hinds Howell, C. M., "Encephalitis
Lethargica," Brit. Med. Journ., March 7, 1925, p. 439.—(5) Wimmer, Chronic
Epidemic Encephalitis, 1924, p. 24.—(6) Stiefler, G., "Die Seborrhæa faciei als
ein Symptom der Encephalitis lethargica," Zeits. f. Neurol. u. Psychiat., lxxiii, 1921,
pp. 455-463.

#### RESPIRATORY DISORDERS.

Respiratory abnormalities in dementia præcox are numerous and frequent. One of the most striking is polypnæa occurring in attacks, during which the respiration rate may reach 50-60 per minute. I have under my care at present a patient who at times holds his breath, and then puffs rapidly in and out until he becomes exhausted and flushed in the face with the exertion. Another patient breathes vigorously in and out, and ends by spitting violently.

I remember one young man who at times used to breathe forcibly in and out in an exaggerated "hysterical" fashion, and who, when asked the reason for the heavy breathing, gave the typical præcox reply, "Too much will-power, that is the trouble." A remarkable patient in whom respiratory disturbances and turbulent choreiform movements dominate the clinical picture holds his breath and

strains like a person attempting to defæcate, then expires suddenly and explosively, and takes a few short breaths in rapid succession.

As a further example may be quoted the case of a precocious dement who usually stands about all day mute and indifferent. At times he grimaces and laughs to himself or exhibits various stereotypies, such as rubbing his hand rhythmically backwards and forwards over the top of his head. At irregular and infrequent intervals he suffers from attacks of intense dyspnæa, which come on abruptly without apparent cause, and during which the pulse-rate runs up to 120, and he becomes cyanosed and develops pulmonary ædema. It is very weird and striking to observe how, at the height of an attack, he disregards his urgent symptoms and his surroundings alike, and breaks into an unintelligible verbigeration punctuated by short bursts of insane laughter.

Abnormally frequent sighing is often a very noticeable symptom in cases of dementia præcox, and a considerable number of patients indulge, for no apparent reason, in spells of breath-holding.

Spasmodic coughing is often observed, and some patients make themselves a positive nuisance to their associates with a frequent loud, dry, barking, "hysterical" cough. In other cases the symptom is not so obtrusive, and we get little nervous coughs, "ahems," repeated clearings of the throat, etc.

I recall a young woman who used to make herself intolerable in the ward by constantly belching with extreme loudness. Other respiratory tics are very common and assume various forms, such as yawning, sniffing, puffing and blowing, snorting, spitting, etc. One patient, subject to recurrent attacks of stupor, with the onset of each attack develops various respiratory tics, sighing, sharp, hissing inspirations, puffing and blowing, little barking coughs, etc.

Disturbances of respiration have frequently been noted in epidemic encephalitis, both during the acute stage and as late manifestations.

- W. Aldren Turner and M. Critchley (1) divide them into three categories.
  - (1) Disorders of the respiratory rate, including tachypnæa and bradypnæa.
  - (2) Disorders of the respiratory rhythm, consisting of sighing, apnœic pauses, Cheyne-Stokes breathing, bigeminal and trigeminal respirations and breath-holding spells.
  - (3) Respiratory "tics," such as hiccup, yawning, "soufflement," *i.e.*, tic-like expiration of air through the nose, and spasmodic cough.

The published papers dealing with the respiratory disorders of chronic epidemic encephalitis are very numerous, and it would be out of place here to discuss in detail the different forms described. I would merely emphasize their striking similarity to those met with in dementia præcox. Semiologically they often show a considerable resemblance to the respiratory disturbances found in hysteria.

Wimmer (2) points out how their association with "hysteriform" or "neurastheniform" troubles, their recurrence in paroxysms "punctual to the hour," their liability to be influenced by psychic factors and their frequent monosymptomatic appearance might lead one into the error of regarding them as psychogenic in origin.

In the present state of our knowledge any discussion of the pathogenesis of the respiratory disorders of dementia præcox and epidemic encephalitis must be largely speculative.

In favour of the causal lesions being situated in the basal ganglia we have (1) the frequent association of respiratory abnormalities with Parkinsonism and with inversion of the sleep rhythm; (2) the absence of co-existing bulbar or pontine symptoms in dementia præcox and the rarity of such symptoms in epidemic encephalitis.

The occurrence of similar respiratory disorders in hysteria seems to me to speak in favour of their thalamic origin.

It is not contended that the basal ganglia are capable on the motor side of carrying out all the complex respiratory tics which occur in dementia præcox and epidemic encephalitis without the intervention of the cerebral cortex.

Rather it is suggested that the cerebral cortex is subjected to abnormal stimuli originating in the basal ganglia; and that these abnormal stimuli find expression or are exteriorized viâ the various psycho-motor paths which lead from the cerebral cortex to the respiratory centre in the medulla.

References.—(1) Aldren Turner, W., and Critchley, M., "Respiratory Disorders in Epidemic Encephalitis," Brain, 1925, xlviii, Part 1, pp. 72-103.—(2) Wimmer, Chronic Epidemic Encephalitis, 1924, pp. 69-72.

## CHOREIFORM MANIFESTATIONS.

Precocious dements often exhibit symptoms very similar to those of Sydenham's chorea.

Choreiform movements.—Of these, by far the commonest are all those spasmodic movements of expression, which are grouped together under the heading of "making faces" or "grimacing."

The patients frown, wrinkle the forehead, twist the eyes, open them wide or screw them up tightly, purse the lips, distort the angles of the mouth, and make irregular movements with the tongue in such a way as to remind one strongly, as Kraepelin long ago pointed out, of the corresponding disorders of choreic patients. Wrinkling of the forehead is particularly common in dementia præcox, and is often observed to occur unilaterally or is much more marked on one side.

Some patients at times display a curious motor unrest; they wriggle their bodies, hotch their shoulders as if they were infested by fleas, twist their heads to one side, distort their faces and make clicking noises with their tongues. Rarely one meets with patients who persistently exhibit wild turbulent movements suggestive of hysteria or chorea gravis. Kraepelin (I) states that he has observed precocious dements who continually carried out peculiar sprawling, irregular, outspreading choreiform movements, to which he gives the name of "athetoid ataxia."

Choreiform movements often occur as late manifestations of epidemic encephalitis, and may simulate either Sydenham's or Huntington's chorea. Grimacing movements similar to those met with in dementia præcox have been reported by many observers.

Choreic hand.—The specific term "choreic hand" was introduced by Dr. S. A. Kinnier Wilson (2) to denote a characteristic posture of the hand, which is found to occur in a very high percentage of all cases of chorea.

To elicit the sign the patient is asked to hold out his hands at arms' length in front of him. If choreic hand is present it will be observed that the hands are flexed at the wrist-joints, while the fingers, usually rather separated, are over-extended at the metacarpophalangeal and to a lesser extent at the interphalangeal joints. The thumb is somewhat over-extended and abducted. A similar posture of the hand can be demonstrated in cases of athetosis.

Choreic hand is a sign that is quite commonly observed in cases of dementia præcox, the posture being exactly the same, although not so accentuated as that found in chorea. It is not contended that the sign occurs in every case of dementia præcox or at all times in any given case, but it is met with sufficiently frequently to be worthy of attention and undoubtedly has a pathological significance. It occurs bilaterally, and, what is more significant, just as often unilaterally.

I have noted this sign in several cases of chronic epidemic encephalitis. In one patient with a unilateral tremor choreic hand could be demonstrated on the same side.

Tachykinesia.—Many precocious dements pass through a phase in which they do everything with an extraordinary abruptness; if they are asked to stand up, they spring to their feet instantly like a jack-in-the-box; if they are handed some article, such as a newspaper, they take it with a sudden snatch; told to sit up in bed they do so with a snap like a released spring, or if ordered to jump out of bed they get out precipitately, as if they had received

an electric shock. When requested to put out the tongue they comply with a jerk, and on the signal for release withdraw it with lightning-like rapidity. If ordered to turn round whilst walking they obey with such abruptness that they nearly fall over. They talk with extreme rapidity, in a characteristic clipped, staccato fashion.

This condition, for which I propose the name of "tachykinesia," contrasts sharply with the bradykinesia which may be observed in the same patients during a stuporose phase of their malady. Tachykinesia is often associated with choreiform movements of the facial muscles, sudden raisings of the eyebrows, twitchings of the mouth, irregular movements of the tongue, etc.

An exactly similar condition has been described by Dr. S. A. Kinnier Wilson (3) in connection with Sydenham's chorea. He states that long after the "involuntary" gesticulations as such have vanished, the choreic child will often still exhibit noteworthy abruptness of "volitional" movement.

I would like to make it clear that I do not for a moment regard the choreiform manifestations of dementia præcox as motor functions of the corpus striatum. On the contrary, it is obvious that they are cerebral in type.

I nevertheless consider that the basal ganglia are concerned in their production, and adopt the view of Dr. Kinnier Wilson that although choreiform movements are exteriorized vid the corticospinal paths, behind their appearance is an afferent disorder of regulation attributable to lesions situated on the cerebello-mesencephalo-thalamo-cortical path.

In conclusion I have to thank Dr. B. H. Shaw, Medical Superintendent of the County Mental Hospital, Stafford, for permission to make use of the clinical material.

References.—(1) Kraepelin, Dementia Pracox, translated by R. M. Barclay, Edinburgh, 1919, p. 83.—(2) S. A. Kinnier Wilson, Croonian Lectures, "On Some Disorders of Motility and of Muscle Tone," Lancet, July 25, 1925, pp. 176-177.—(3) Idem, ibid., pp. 174-175.

The Educational Adaptation of the Individual Child. (1) By F. C. Shrubsall, M.A., M.D., D.P.H., F.R.C.P., Senior Medical Officer, Public Health Department, London County Council.

This paper is not intended as a study of children, but merely a description of the work undertaken by a local education authority.

150 years ago there was put forward a declaration in which the signatories declared: "We affirm it to be the self-evident and

<sup>(1)</sup> A paper read at the Annual Meeting held in London, July 14, 1926.

undisputable truth that all men are born equal." None have done more to show that this statement cannot apply to the basic nature of the individual than the students of the nation, whose independence was declared in the aforementioned document, but the right of every individual to equal care from the nation has received widespread acceptance throughout the civilized world. Every child has a right to the best available nurture. A most important form of nurture consists of education, and nowhere are there greater facilities for its provision than in the County of London. basic elements of intelligence, emotion, control and desire must be accepted as a datum line which cannot be influenced, but upon this basis the best possible super-structure may be erected. been pointed out from many sources that the most important period for education is the first 4 or 5 years of life. The priests at the Porte Royale school stated: "Give me a child for the first 5 years of life and I care not who handles him later." Freud, in his introductory lectures, has stated: "The little human being is frequently a finished product in his fourth or fifth year, though he only gradually reveals in later life what lies buried in him." Since this important period precedes that of compulsory education, it will be recognized that local education authorities have at present little direct influence at this stage, though a certain number of children are taken into nursery schools. However, it may be

In this connection, attention should be drawn to instruction in mothercraft in the elementary schools, in certain secondary and trade schools, and more especially, as approximating nearer to the time when the lessons learnt have to be put into practice, to the instruction in infant welfare and child management given in the classes conducted in the evening institutes under the London County Council. In the course of this instruction, special attention is now given to the importance of character-training as well as of physical care. There is abundant evidence that the physical welfare of the children has improved and that the infant death-rate has fallen pari passu with the instruction of the parents, so that there is every reason to believe that similar results will follow in the training of the character of future generations.

claimed that the education of the child really begins with the

education of the parents for their future duties.

From the age of 5 onwards (and not infrequently a year or two earlier) the great majority of the school-children of London come within the purview of the local education authority and the Education Committee of the County Council. From the infant school onwards there is a graduated ladder leading to the University, commerce, trade or industry, on the one hand, for those capable of

deriving normal profit from education, or to specialized occupations for those suffering from physical or mental handicaps. Primarily, however, it must be realized that the main aim of the elementary school is not to teach a trade to children, but to give them their first lessons in citizenship and to develop alike their minds and their bodies. Every child receives instruction in the three tools necessary alike for work or leisure—reading, writing and arithmetic. Every child is given some instruction in the language and literature of his country, and the history and geography of the British Empire, and, to a less extent, that of other countries. By means of naturestudy every child is taught something of the world, is encouraged to draw, to sing, and to acquire the elements of manual dexterity. while his physique is fostered by carefully graded physical exercises and organized games; in particular, special attention is rendered to swimming—an art acquired by some 30,000 boys and girls of the London schools every year.

Handwork is taught throughout the schools; from the age of II every boy is taught wood-work or metal-work at manual training centres, and every girl household management at domestic economy centres, the instruction being given by a specialized staff, the aim again being, it is stated, to awake manual dexterity rather than to make the boys carpenters or the girls cooks. The instruction in the school is supplemented by educational visits to places of interest in London, or even by organized journeys, when as much as a fortnight may be spent in the country or at the seaside.

Children stay in the elementary school until the end of the school term in which they attain the age of 14, but they can, if their parents wish, remain until 15. While this represents the course of the average child, further arrangements exist for those who show special abilities or disabilities.

A large amount of attention is devoted to the social welfare of the children. Every elementary school has a care committee of voluntary workers interested in child welfare. The care work is dealt with through local officers with a small permanent staff for administrative and clerical duties, the field service, for visiting the parents and agencies which can help children in distress, being carried out by the voluntary worker, who deals on the one hand with the varied problems of health, and on the other hand with the difficulties of adjustment at adolescence, giving advice on occasions of disappointment or trouble and helpful guidance towards suitable pursuits and congenial employment.

There is regular medical inspection in all the Council's schools and institutions, and arrangements are made for the treatment of all defects found. Provision has been made for dealing with

certain ailments by contract with clinics formed for the purpose by associations of local medical practitioners.

Children attending ordinary elementary schools in London are medically inspected as a routine measure—

- (a) On their entrance to school life, or, if no medical record concerning them is available for the school, in the year of their admission.
- (b) During the year in which they attain the age of eight.
- (c) During the year in which they attain the age of twelve.
- (d) A few months before attaining the school-leaving age of fourteen.

Special examinations are made of children of other ages on whom a medical report is urgently needed, e.g., of those who have been absent from school for three months or more, and who are still absent, if there is not satisfactory evidence as to their continued ill-health and unfitness for school life, and for those who are suggested as possibly being physically or mentally defective. This latter inspection is quite distinct from the statutory examination for admission to special schools, and it is intended to secure the treatment of any remediable defects prior to a statutory examination.

Children found to have defects are referred for treatment to be arranged through the Care Committee Organization, and all such are re-inspected on one or more occasions, as may be necessary, to follow up the results of the treatment received. In 1925 the number of school doctors (if working full time) might be computed as 56; the number of children medically examined was 316,722; and the number of ailments treated under the Council's scheme was 254,000.

The improvement in physique has been most marked. The child of 8 years old to-day is half-an-inch taller and nearly 4 lb. heavier than that of the corresponding age 20 years ago. The standard of personal cleanliness is rapidly improving, and the parasitic fauna and flora of the body are rapidly disappearing. The dental improvement is most marked; as a consequence children are sent out into the world far better equipped for the struggle of life than were their predecessors.

When the time comes for the child to leave school, each individual case is considered by a committee in connection with the juvenile employment exchanges, on which are representatives of teachers and care committee workers and organizers, who advise and endeavour to place the boy to the best advantage. For the most part this is done on the basis of the child's statement of his tastes, considered in relation to his physique, medical record, and the reports as to his attainments. An experiment is being tried in certain areas of

supplementing this by experimental investigation into vocational aptitudes, special examinations by the Council's medical staff being combined with psychological investigations carried out by the staff of the National Institute of Industrial Psychology. The tests employed include the study of the mental age and intelligence quotient, linguistic ability, and a wide range of performance tests, details of which can be obtained. Should the result be found to justify the cost, an extension in this direction might prove of the greatest value to the children.

Should a child prove to have attainments or potentialities above the average, provision exists for more advanced education in the form of scholarships to secondary or trade schools. Children who fall just below this level may be sent to central schools, the central school being a type intermediate between the ordinary elementary school and the secondary school, and such schools are to be found in every area. The instruction given in central schools is described as general rather than vocational, but the curriculum has an industrial or commercial bias according to the needs of the neighbourhood in which the parents live. The subjects taught are more advanced than those in the elementary school; manual training is carried further, and a modern language and commercial subjects are introduced. It has been estimated that about one child in ten shows superior abilities, and an attempt is made to select these children by examining them at the age of about II; the cleverest children (about 1,500 a year) go to secondary schools, and the next 5,000 go to central schools. To meet the case of the child who develops somewhat later, there are supplementary scholarship examinations at about the age of 13. The Council conducts its own examinations, and the papers are prepared by the chief examiner and approved by a Board which includes representatives of the teachers, inspectors, examiners and the administrative staff. The examination for junior county scholarships consists of English and arithmetic. In supplementary examinations at the age of 13 history and geography are added, and in the case of trade scholarships there is in addition an examination in drawing for both sexes. in needlework for girls, and wood- or metal-work for boys. So far, no direct intelligence tests have been employed; a scheme was put forward, but has had to be suspended for the time being.

It may be noted, however, that in each subject there are two papers, the first of which is of an ordinary straightforward character, while the second is specially directed to require the application of common sense rather than of the ordinary rules. This paper therefore functions fairly directly as an intelligence test. It is certainly the aim to make the examination as much a test of natural

ability as is possible, and to miminize as far as practicable the effect of teaching and attainment.

The Junior County Scholarship examination is preceded by a preliminary examination, the main purpose of which is to reduce the number of candidates to about one-third. This preliminary examination is carried out by the head teachers of the individual schools concerned. On an average of the last 8 years the annual number of competitors at preliminary examinations has been about 47,000, the number admitted to the final examination has been about 17,000, and the number awarded scholarships about 1,700, while roughly some 6,000 children have been selected in this way for attendance at central schools. At a later age about 7,000 children compete for Supplementary Scholarships, of which about 500 are awarded, while about 7,000 candidates compete for some 800 trade scholarships.

Once the secondary school has been entered, as the result of satisfactory progress and passage of various public examinations, the young man or woman may proceed to intermediate or senior county scholarships, which will lead to training of university standard, or to bursaries for admission for training for the teaching profession.

All children who are proposed for these forms of further education are medically examined to ensure their fitness for the particular course proposed, and, where necessary, recommendations are made for modifications of their educational treatment, e.g., in the case of those liable to eye-strain a diminution of the home-work may be suggested, or they might be recommended for certain secondary schools in which there are special classes for short-sighted children.

The provision made for the ailing or subnormal child is no less extensive. From the very first it has been recognized that illhealth was a reasonable cause of absence from school, but when it appeared that there were numbers of children whose condition was such that education in an ordinary school was impossible over considerable periods, arrangements were made to provide educational facilities of a different character. Schools have been established in connection with various hospitals in which active surgical treatment of defects can be carried out, while permitting of education in classes held in the hospital itself during certain hours of the day. The value of education in such schools has been thoroughly recognized as an aid to treatment. Since the primary aim is treatment rather than education, the schools are conducted by the hospital authorities, and not by the Council directly, but grants are made towards the cost of children admitted with the concurrence of the Council. The Council directly provides schools for the special education of the blind, deaf, physically or mentally defective, and for stammerers, and it also secures places in schools attached to colonies for those suffering from frequent or severe epilepsy.

A blind child is not necessarily one who has no sight, but is one who is too blind to read the ordinary school-books used by children. Those with impaired vision of all kinds are admitted, so long as the disease is not of an infectious character. Arrangements exist whereby those suffering from chronic infectious conditions are sent to residential country schools conducted by the Metropolitan Asylums Board. Instruction in the schools for the blind includes the teaching of Braille and suitable forms of handwork occupation. After the age of 12 suitable children are transferred to schools which provide special trade training up to the age of 16. Besides the schools for the blind, there are others known as "sightsaving" schools, in which children are taken who suffer from high or progressive myopia, or from conditions which seriously impair vision and incur risk of eye-strain. In the sight-saving schools there are small classes in which the ordinary methods of teaching, reading and writing are not employed, but the children read from large sheets with at least half-inch letters, and stand up to blackboards, so that writing is done at arm's length, whereas in the ordinary schools silent reading is encouraged. In these classes instruction is mainly by word of mouth, though the children may go for oral instruction only to adjacent elementary schools. The aim of these schools is firmly to discourage reading other than from suitable type under suitable conditions, so as to avoid prolonged convergence of the eyes, and to encourage upright attitudes and improvement in general health.

A deaf child is one too deaf to be taught in a class of hearing children. In these schools oral methods of instruction are used. special attention being paid to lip-reading and pronunciation. the later years children are transferred for special trade training until the age of 16. Deaf children may be admitted from an early age, although from an anomaly of English law, attendance cannot be enforced until the age of 7. It has been found by repeated experience that the earliest years are those in which the greatest advantage is gained, and parents are therefore urged to allow their children to attend as young as possible. Special classes are provided for those who are not quite deaf, the aim in these classes being to reinforce hearing by the acquisition of lip-reading; in consequence these children attend for part time in ordinary classes and mingle with their normal fellows in games and the like. As soon as they have acquired sufficient powers of lip-reading they are transferred to the ordinary school.

A physically defective child is one who by reason of physical defect is incapable of receiving proper benefit from instruction in an ordinary public elementary school, though not incapable of education in a special school. The usual ground for admission is some form of crippling or organic disease, which renders attendance at an ordinary school disadvantageous, but which does not prevent the child being safely educated in a small class under surgical supervision. An ambulance service is provided, arrangements are made for a certain number of recumbent cases in each school, and a trained nurse is constantly present to attend to the needs of the children. When a physical defect is sufficiently alleviated to permit of a child undertaking the curriculum at an ordinary school with safety, he is re-transferred.

The constant nursing and surgical supervision forms a link with the after-care arrangements of the hospitals, since children are referred back for further advice and treatment directly any adverse change occurs, or any apparatus requires repair. Instead, then, of treatment being instituted for a time, and then, perhaps, dropped for some years, to be resumed only when increased evidence of deformity drives the parent to seek advice anew, it is rendered available at the very onset of any untoward occurrence. The majority of the children attending schools for the physically defective are those suffering from paralysis, quiescent tuberculosis of the bones or joints, congenital deformities, or valvular disease of the heart. A certain number who have suffered from rheumatism may also attend. Owing to the advantages and facilities for treatment now available, it has been found that cases of tuberculosis are more readily and rapidly cured than in former days, and their proportion in the day special schools has diminished. the other hand, a larger number of cases of heart disease are being admitted. Elder children are transferred to separate schools for trade instruction, and efforts are made to teach them such trades as are adapted, on the one hand, to their physical defects, and, on the other hand, to the possibilities of securing employment in the district in which they live. A certain number of scholarships are available to provide courses of higher education for crippled, blind or deaf children. Open-air schools are provided for debilitated children, and also separate schools for those suffering from definite Those who need sanatorium care, pulmonary tuberculosis. whether for pulmonary or surgical tuberculosis, or who require surgical care as a result of infantile paralysis, can receive the necessary surgical treatment under the arrangements made by the Council as a Public Health Authority.

Mentally defective children are those who, not being imbecile or

merely dull and backward, are, by reason of their mental defect, incapable of receiving benefit from instruction in an ordinary elementary school, but not incapable of receiving benefit in special schools or classes. Any child proposed for admittance to such a school is, first of all, medically examined, to see if the backwardness may be due to any remediable defect, such as poor vision, partial deafness, mouth-breathing and the like, all necessary steps being taken to secure and observe the effects of treatment before a final diagnosis is made. Children are admitted to the special school for mental defectives only after examination by certain members of the school medical staff who have been specially recognized for the purpose. Generally speaking, the children admitted are those whose mental age as estimated both by tests of the Binet Simon pattern and by performance tests amounts to less than three-quarters of the normal, provided they have in other ways shown themselves incapable of education in the ordinary If a child improves under the individual training of a special school, he will be re-transferred to the ordinary school; if, on the other hand, after a considerable trial no progress is made either on the educational or the occupational sides, the attention remains fleeting and the reasoning faculties undeveloped, the child may have to be excluded as imbecile. At the age of 151 the cases of all children in schools for the mentally defective are reconsidered in the light of their environmental and home surroundings. Those who appear capable of fending for themselves receive ordinary after-care until the age of 18, whilst those thought to need institutional treatment or guardianship are referred to the local authority under the Mental Deficiency Act, this in the case of London being the Mental Hospitals Committee of the Council.

The special schools are regularly visited by the members of the Council's medical staff, and by the ophthalmic, otological and orthopædic consultant officer, so that supervision from a medical and surgical standpoint is continuous. The Council also provides for the education, maintenance and training of children who, owing to unfortunate circumstances or for some offence, have to be removed from their homes by order of the Juvenile Court under the Children Act. Prior to being sent to an industrial or reformatory school, these children receive a physical examination by the medical officers (general practitioners) attached to the remand homes, and where there is any physical defect or any doubt as to their mental condition, whether the problem be that of defective intelligence or instability of character and temperament, mental examinations by a specialist staff are arranged. The work in this connection is linked up when necessary with that of various

clinics. The services of the Council's medical staff and of the psychologist are also available for the study of difficult children who may be nominated for examination by parents, teachers, members of the care committees and the like, while the children's care organizations take great pains in securing the boarding-out of children in whose cases a temporary absence from home is considered desirable. Those suffering from the sequelæ of encephalitis lethargica have proved very difficult, and the Council is now fortunately able to send a number of these cases to the institution of 100 beds which has been provided for juvenile sufferers by the Metropolitan Asylums Board. For those children who are definitely ineducable in school on account of mental defect, or on account of certifiable insanity, the ordinary arrangements with which all are no doubt familiar apply.

In general it may be said that, wherever necessary, every child is considered as an individual, and attempts made to modify its educational treatment in accordance with its special needs. The Procrustean method, whereby the child must fit the machine, if it has not entirely disappeared, has almost become a thing of the past. All factors—mental and physical—are taken into account, and as a result it can undoubtedly be maintained, without undue boastfulness, that the London child is second to none in this country.

# STATISTICS ON THE PROVISION FOR EDUCATION IN LONDON. Secondary Schools.

County secondary schools Schools "aided" by Lond	on C	•		_					. 24
Total number of pupils	•	•	•	•	•	•	•	•	. 31,000
	T	echnic	al Ins	titutes	5.				
London County Council In	stitu	tes	•						. 18
" Aided " institutes .		•	•						. 28
Total number of students	•	•	•		•	•	•	•	. 54,000
		Trad	le Sch	ools.					
Number of schools .		•							. 24
Number of students .	•	•	•	•	•	•	•	•	. 3,200
		Cent	ral Sc	hools.					
Number of schools .									. 6t
Number of pupils .	•	•	•	•	•	•	•	•	. 20,000
	Day	Conti	nuatio	m Sch	ools.				
Number of schools .									
Number of students .		•	•	•		•	•		. 5,000
	i	Evenin	g Ins	titutes					
191 evening institutes with	h 120	,000 9	studer	ıts.					
	E	Elemen	tary S	School	5.				
London County Council so	hook	з.							. 604
Non-provided schools .			•	•	•	•	•	•	. 356
Total number of pupils	•	•	•	•	•	•	•	•	665,000

1926.] SOME FORENSI	C	ASPE	CTS	OF E	EPILE	EPSY.	•		533		
Special Schools.											
Schools for the blind and deaf									48		
Schools for the physically defect									37		
Schools for the mentally defective									78		
Schools for tuberculous children		•						•	5		
Day open-air schools									4		
Residential open-air schools.	•	•	•	•	•	•	•	•	3		
Medical Inspection and Treatment.											
Number of doctors (25 full-time,									89		
Children inspected in 1925								316,722			
Ailments treated under the Council's scheme in				1 192	5 •	•	•	25.	4,000		

Some Forensic Aspects of Epilepsy. (1) By W. Norwood East, M.D.Lond., M.P.C., Medical Inspector of H.M. Prisons, England and Wales.

A DEFENCE of insanity is frequently raised in answer to a serious criminal charge if the facts of the case clearly indicate the guilt of the accused. From time to time in such circumstances the jury are invited to exculpate the prisoner on the ground that the act was committed during a condition of epileptic automatism.

Crimes due to the epileptic psychoses are often so dramatic that there is, I believe, a tendency to consider they occur more frequently than is actually the case. The percentage of epileptics in prison at any time is small. Of 8,731 male prisoners, 39, or 0.4%, were considered to be genuine epileptics, and of 760 female prisoners, 5, or 0.6%. And the crime was not always due to the disease.

It is of some interest to note the fact that automatism is the epileptic state usually alleged to be responsible for a crime. The other mental conditions which occur associated with, or independent of, the fits are seldom said to be the cause. It appears to be a matter for conjecture whether one reason for this may be because automatism, if accepted, completely satisfies the requirements of the criminal law as regards irresponsibility, whereas other epileptic states may be more difficult to bring within the strict McNaughton ruling.

The convenience of this defence is obvious. A history of fits is usually forthcoming, and although these may be no more than the screaming fits of childhood, or fits of temper in later years, they are sometimes offered to the jury as evidence of epilepsy. Further, an astute offender, alert to any defence, will readily assent to a suggestion that he has experienced from time to time transitory periods of forgetfulness, which he then proceeds to magnify into temporary phases of oblivion. It may be extremely difficult to determine

(1) A paper read at the Annual Meeting held in London, July 16, 1926. LXXII. 37

whether or no the past history shows any evidence of epileptic disorder, without suggesting to the subject the trend of the inquiry and the probable answers which will serve his purpose. In fact in genuine cases a reliable history of convulsions or psychic equivalents may be difficult to obtain, whereas the malingerer may give a history which strongly suggests the disorder.

In certain cases the jury may receive little assistance from the witnesses of fact. They may be obliged to rely mainly upon the opinion of the expert witness, which often itself is founded upon suppositions, which are not necessarily accurate. There may be, indeed, no first-hand evidence whatever to put before the jury. And if the mental examination of the accused is negative the expert is obliged to base his opinion on the statements made to him, on the known facts of the case, and on a comparison of the same with automatic conduct associated with epilepsy. The first of these two are beyond the alienist's control for the most part; the latter is a matter for medical agreement. But not only is a criminal act sometimes assumed by the examiner to be due to epileptic automatism, but the epilepsy itself is taken for granted. killed a prostitute by cutting her throat; he then wrapped the body up and attempted to hide it. Later on in the same day he informed the police of what he had done. The details of the crime showed motive, premeditation, preparation, memory for the acts committed, and efforts at concealment. In spite of these facts a defence of epileptic automatism was raised upon a very indefinite history, which suggested that the accused had been subject to "fits" up to the age of 5 years. It was unsuccessful.

Disagreement is liable to arise in these cases between opposing experts. This should often be unnecessary, and it is in the hope that a discussion by the members of this Association will decide the main point upon which medical witnesses dispute, that I venture to bring before you certain cases of genuine and alleged epileptic automatism associated with crime.

I do so with less trepidation than I otherwise should as Lt.-Col. Lord has recently recorded the fact that on the whole his views on epilepsy have not changed much during his many years of psychiatric practice. And the point of view of the neurologist has been lately expressed by Dr. Farquhar Buzzard, who records his conviction that the last quarter of a century, although not devoid of praiseworthy efforts, has seen little light thrown on the pathogenesis of epilepsy.

Even when a crime is clearly due to automatic action it remains necessary to pursue the matter still further, and decide which of the three most important causes of automatism seen in the

criminal courts-alcohol, epilepsy or hysteria-are responsible for it. Alcoholic automatic crime usually presents no difficulties of diagnosis. But major crime associated with hysterical automatism is, I believe, uncommon. It does, however, seem important to differentiate it from epileptic automatism lest matters of dispute arise in court between opposing experts if one regards the case as hysterical and the other epileptic. This was brought home to my mind in considering the evidence I should give in the following case: A youth aged 21 was charged with attempting to murder his sweetheart and with attempting to commit suicide. He had never had any serious illness, and had never shown any indications of epilepsy, somnambulism or automatism. He was able to swim, and a year before when swimming for the first time in the sea, on approaching a yacht at anchor, suddenly found that he was unable to use his legs. He was rowed home. He fancied he saw his dead mother in his room one day soon after her death and collapsed. He acted strangely a short time before the crime. He sent a bogus telephone message to his sweetheart, which purported to come from a hospital, informing her that he had been admitted seriously injured. When the girl arrived with her father at the hospital she discovered she had been hoaxed. Soon after he sent another bogus message stating that her mother, who was in a mental hospital, was very ill. He accompanied the girl by train to the bedside; on arrival she found her father already there and her mother in her usual health. On another occasion the girl was asked by a messenger to meet the accused in a certain street and to come alone. She went with her father. The accused, on seeing them, ran away; he was followed and caught. He then became excited and alleged he had been robbed of a considerable sum of money. This was fictitious. Some poison was found in his pocket on this day. He did not go to work on the day of the crime, saying he felt ill on account of a bad dream he had the previous night. He spent the morning happily with the girl. Returning in the afternoon he found she had gone to lie down. He talked with her sisters for some time, and when left alone went up to the girl's room, and she awoke as he entered. He said nothing, but attacked her with a razor and then cut his own throat, and held his head out of the window, letting the blood fall on the pavement below until he collapsed. His wound was a serious one. The girl could give me no reason for the attack. She said that she and the youth were very fond of each other, and never quarrelled, and that he had always treated her as a gentleman. The accused gave no reason for the offence, and always maintained he had no recollection of the affair. In many interviews the period of the amnesia never varied,

and I regarded it as genuine. He was markedly suggestible. area on his forearm brushed over with infusion of quassia in a rather ostentatious manner showed blunted tactile sensation when the subject was blindfolded, and a pin-prick which caused him to wince elsewhere was less effectively felt over the painted area. accused throughout maintained that he was normal mentally. crime appeared motiveless. It was accompanied by alien conduct of a theatrical type on the part of an emotional adolescent, who was attacked by a functional paralysis when swimming, and in whom partial anæsthesia and analgesia were readily produced by indirect suggestion. These indications of morbid functioning were accompanied by pathological lying and amnesia, and were attributed to hysteria. His counsel avoided a defence of insanity at his trial, but the judge called me, and I stated that I believed the youth's story, and that, assuming it were true, he would know neither the nature and quality of his act nor that it was wrong. The jury accepted this view.

Criminal conduct showing motive, premeditation or preparation, full memory of events connected therewith and efforts to evade arrest are inconsistent with epileptic automatism. But crimes may appear motiveless, although committed with good reason, and conversely an object may be suggested for an act which is in fact causeless. An epileptic suddenly finding himself in a compromising situation, the result of an automatic crime, may at first seek safety in flight until wiser counsels prevail. So that in these, as in all criminal cases, the whole available material must be scrutinized before arriving at a diagnosis. This was well shown in the following case. A woman who had been shopping returned home through a park, and noticed that the accused, a man, aged 27 years, rose from his seat as she passed him and followed her for a long distance, until she reached a quiet spot. He then overtook her and knocked her down with a blow from his fist, and when she screamed struck her with a knife. He then took something from her bag and ran away, either because he had effected his purpose or because he saw a police officer hurrying towards them. He was chased and was seen to throw something away as he ran, and the woman's purse, containing a considerable amount of money, was found at this spot. He attacked the police officer who came up to him with his knife, and he could not be overpowered until a second officer had used his truncheon. He did not speak at all until he was in hospital, whither he had been sent as a precautionary measure by a doctor who saw him. The accused was an epileptic who was out of employment at the time. He had been previously convicted for theft and assault. He alleged he had no recollection whatever of the offence, but certain statements that he made were known to be false. Nevertheless the fact was borne in mind that epileptics and insane subjects do make false assertions in their endeavours to evade culpability. But the offence appeared to be committed with a definite motive—robbery; to have been carried out with precautions—he did not attack the woman until they reached a secluded spot, and he attempted to escape and to conceal the fruits of his crime. His conduct consisted of a connected series of purposive actions, which could be associated with his normal personality. I did not consider the offence resulted from epileptic automatism or excitement, and he was not considered to be insane by the jury.

Probably most observers will agree that crime occurring during epileptic automatism usually occurs as an epileptic equivalent. least this can be said—that no attack of major or minor epilepsy appears to be associated with it as a rule. It has been said that automatic action, if any, is always of the same type in the same case, and the late Sir Richard Muir used to relate the case of a man whom he thrice defended for indecent exposure. He was an epileptic and a strenuous brain-worker, and on each occasion the exhibitionism followed a period of unusual stress and was considered to be automatic. But there are many exceptions in criminal practice. A man cut his wife's throat with a razor one morning as she lay in bed. He said that he remembered leaving the bed to go to the lavatory, and the next thing he recollected was standing over his wife and finding her with a large wound in her throat, dead. He gave himself up to the police, and when I saw him eight hours after the crime his distress was obviously genuine. His family declared they all lived happily together and could suggest no motive for the crime, but they related a series of abnormal actions which the accused had performed and of which he retained no recollection. He had on one occasion thrown a handful of money, gold and silver, on the fire; an another occasion he suddenly, without speaking, threw the pet dog he was nursing through a window; he had driven the family out into the garden in their night attire. These and other similar acts, unprovoked and unconnected with preceding incidents, had occurred at intervals over a prolonged period, and were followed by amnesia and were considered to be epileptic.

Mercier laid stress upon the fact that post-epileptic action, usually, was of the nature of an habitual act or the caricature of such an act. An excellent example of this came under the observation of Dr. G. B. Griffiths, who was called for the defence at the trial of the case. An epileptic, a highly respectable man, devoted to his family, after a period of mental anxiety suddenly attacked his

wife and two daughters with a coal-hammer. His wife died from her injuries. The accused stated that he was about to make her a cup of early morning tea, and whilst awaiting its preparation commenced to break up some coal with a hammer. He remembered hearing the kettle boil as he did this, and then he said "blood came from the coal." The next thing he remembered was one of his daughters standing at the front door with blood on her face saying that he had hit her. He rushed to the police station partly clothed and told them to go at once to his house, as he had killed his family. On arrival they found the three injured women in their beds. The accused was found guilty, but insane.

It would be, however, an easy matter to suggest that many crimes of violence and lust, in which the offender alleges amnesia, were caricatures of an habitual act. And it would be unsafe to unduly stress this point in the diagnosis of epileptic crime.

The outstanding feature of criminal conduct due to epileptic automatism is, of course, its dissociation from the personality and independence of his control. Savage, writing in the year 1896 on masked epilepsy, regarded the condition as rare; he said that he had only met with three cases, and that it was important, if the condition did exist, to recognize it fully, but that "it would be a very dangerous thing generally to allow a person accused of crime to plead epileptic 'unconsciousness.'" He considered the essentials were "loss of recollection of whole continuous periods of life. these being what might be called a double consciousness," and he regarded the condition as being closely allied to somnambulism. Mercier stated that "in automatism whatever acts the epileptic then does he retains not the slightest trace of recollection afterwards." Maudsley observed: "A remarkable circumstance which has occasionally been observed in connection with these incomplete attacks is that after the individual appears completely restored to himself, and speaks and acts as if he were so, the attack recurs, and when it has passed off and he is really himself he remembers nothing of what he said and did in the interval of seeming lucidity." F. J. G. Pietersen writes: "Undoubtedly the condition may be feigned by educated persons, but in such the complex acts will usually be found to be too purposive in character, a motive can usually be discovered to underlie the deed, and they will, on being closely questioned, betray their consciousness of the act itself." The Dictionary of Psychological Medicine, edited by Hack Tuke, states that in psychic or masked epilepsy there is complete forgetfulness of the circumstances of the attack. Jelliffe and White, in their Diseases of the Nervous System, state: "An attack of mental disturbance may take the place of the convulsion and thus become an

epileptic equivalent. These attacks of psychic epilepsy frequently take the form of so-called epileptic automatism or epileptic dream states. In these conditions the patient may do almost anything, and when he comes to himself he has absolutely no recollection of what has happened." (4th Edition, p. 957.)

In the genuine examples of automatism to which I have referred, an entire absence of memory for the events connected with the crime was affirmed and accepted. I would add two further illustrations of this point: A temperate youth of 20 years, who was known to be subject to epileptic fits, stated that a fit commenced with a shaky feeling in the head, which extended to the back, and that he then became unconscious. He was charged with the murder of his wife, a girl about his own age, and to whom he had recently been married. The couple lived with the parents of the accused, who left them on the evening in question sitting amicably together outside the house, whilst they went to an entertainment. The accused and his wife were seen by a neighbour some time later to enter the house together, and not long after the youth rushed out and said his wife was dead. He then drank some spirits of salts from a bottle kept in the house for cleaning purposes. He was removed to hospital, and when handed over to the police in due course, said: "I don't know what made me do it: I haven't cried over it at all. I must have been in a fit when I did it. I have had fits ever since I was hit on the head when I was a boy." The girl's death was due to strangulation and there was no evidence of any struggle. The accused stated that when he and his wife went indoors they lay on the bed together, and he put his arm round her; he then felt the shaky feeling come on and he lost consciousness. On recovering himself he found his wife was He showed slight mental dullness, and was apathetic concerning his wife's death and the possible consequence it might have to himself. His mental condition deteriorated appreciably during the two months he was awaiting trial. No motive was suggested for the crime and I believed the amnesia was epileptic and genuine. The jury accepted my opinion.

The following case was more striking. A single man of good character and temperate habits, charged with being on enclosed premises, was remanded for his mental condition to be inquired into. He gave a history of convulsive attacks after a head injury ten years before. He said that his mates knew when the fits were coming on and had told him that "he stood and studied." They then looked after him until the attack was over. His sister corroborated the history. She said the fits lasted about three minutes, and he had been under treatment at two hospitals for them. He was out

of work at the time of the offence. He went through the open doorof a house and picked up a baby placed in a perambulator inside the entrance, and walked upstairs with it in his arms. The mother, hearing the infant cry, came down and met the accused and tried to get her baby from him, but unsuccessfully. She became frightened and ran out for a policeman. On her return with the officer she met the accused coming out of the house without the baby, who was not injured at all. She said that he then seemed quite a different man. The accused stated that he remembered listening at an out-of-door meeting on unemployment in the street in which the house was situated; then came a complete blank until he found himself standing between two policemen outside the house. When under observation in the prison hospital ward he walked one afternoon to the door saying, "I'm coming, I'm coming," and appeared to an experienced officer to be quite unconscious of his surroundings. A medical colleague saw him almost immediately. He was conscious then but had no recollection of the occurrence, and the plantar reflexes gave an extensor response for a short time.

The main difficulty in forming an opinion upon the mental condition of an accused person arises from the insufficiency of facts available for the purpose. This was overcome in the cases to which I have referred. In the following case certain essential medical links in the chain of evidence were missing: A young man aged 21 years was charged with indecently assaulting a girl aged 8 years as she was wheeling a perambulator along the street. He came behind her, made some remark, and lifted up her clothes. The girl went to her home close by and told her father: he came out and approached the prisoner, who ran away. He was caught and said nothing, but when seen some time later by a detective stated that he felt ill. Still later at the police station he said, "I don't know half what I do or don't do lately; I am about done now." He was said by the police "to answer questions briefly and in a disinterested manner, and appeared to be in a state of oblivion and lacking in concentration." His sister called at the station and stated that he had been very depressed and that it was feared he might attempt suicide. He had been recognized as a somnambulist during childhood, and had had frequent lapses of memory in later years. On one occasion, after an acute illness, he was sitting on his bed and remembered nothing until he was found a mile away from the house, and other periods of automatism had occurred of which there was corroboration. He stated that on recovering from them he felt as if he "had been asleep in his clothes." He alleged that on the day of the offence he had no recollection of what occurred from leaving home at mid-day until he awoke next morning in the police-station.

was reported by his very respectable parents to have become depressed, irritable, morose, solitary and impulsive, and had shown much concern at his attacks of loss of consciousness. There was no history of any convulsive attacks. His accounts of the offence never varied, and this much could be accepted: creditable periods of automatism occurred in a somnambulistic subject whose psychotic disturbances were of the epileptic type. The offence might be regarded as the caricature of a sexual act. The attempt at escape appeared to indicate a conscious appreciation of the position in which he found himself, as did his statement that "he was about done now and did not know half what he did or did not do lately." The latter was, perhaps, at variance with his assertion that he recollected nothing from leaving home until he awoke next morning, and was inconsistent with unconscious automatism as it connected that condition with the conscious experience of his normal life. On balance the material appeared to indicate that, either the offence occurred during a period of automatism in a person who fled from the situation on becoming aware of it, and who exaggerated the length of the amnesia in an effort to excuse himself; or that the assault occurred in an epileptic who purposely endeavoured to deceive and shelter himself under his disease; or that it was due to a psychoneurosis.

I have brought these cases forward to illustrate epilepsy as it usually presents itself for consideration in the criminal courts, where facts are all-important and theories often at a discount. There would seem to be no doubt that epileptic furor may result in crime, which is remembered when the epileptic has become his ordinary self. But epileptic automatism is sometimes alleged in cases in which it is clear from the evidence that the accused had some recollection of the events connected with the crime, and medical evidence is sometimes brought forward in support of this view. My own experience is that the automatic acts are not remembered, and I derive support in this from the weighty authorities I have quoted. If the members of this Association confirm the views of Savage, Maudsley, Mercier, Pietersen, Jelliffe, White and others, an important forensic decision will have been reached which will be of value to many medical witnesses in criminal trials.

Psycho-analysis and its Developments. A Discussion held at the Annual Meeting of the Royal Medico-Psychological Association in London on July 15, 1926 (vide p. 550).

Opening Paper by W. A. Potts, M.A., M.D., Hon. Physician, Tavistock Clinic; Psychological Expert to the Birmingham Justices.

THERE is in the mind a mass of past experiences which cannot be readily remembered. We also know that while the individual is aware of some of the processes of elaboration going on in his mind, there are other mental processes which elude his observation. Both forgotten experiences and unrealized mental processes constitute material of which the individual was said to be "not personally conscious." The modern psychologist says the forgotten memories and the hidden mental processes are in the unconscious or subconscious mind, a stratum of the mind below the threshold of personal consciousness. He bases this statement on the conception that while the mind is a complete entity, it is so disposed that while the contents of one portion can be at once investigated by the individual, the rest is not so easily explored. The accessible portion is called the conscious mind, the rest the unconscious. Dr. G. Stanley Hall compared the mind to an iceberg, floating in the ocean with one-ninth visible above the water and eightninths below, the visible ninth corresponding to the conscious mind, and the larger submerged portion to the unconscious mind. Before the time of Freud there was no satisfactory method of exploring the unconscious. Freud, when dealing with neurotic and mental patients, was dissatisfied with the results obtained by hypnotism. But he noticed that some experienced relief, and also improved, when encouraged to talk frankly about their anxieties and difficulties. He worked out a method of exploring the unconscious mind, called psycho-analysis, founded on the theory that dreams are not accidental or meaningless; interpreted by the method of free association, they constitute the royal road to the unconscious mind. Free association means that when the analysand is asked of what a particular item in the dream makes him think, he gives the idea that first occurs to him, however far-fetched or absurd it may seem, and then allows one idea to call up others without let or hindrance. In the unconscious so investigated, Freud found the real motives of unusual, irregular or erratic conduct. Continued investigations convinced him that the unconscious consists largely of unfortunate experiences in early life and of

primitive instincts and desires, many of a sex origin. Abnormal conduct and behaviour were often found to be the result of a conflict between some of the contents of the conscious and unconscious minds, due to the fact that moral standards and other restraints of civilization lead to the stifling of primitive desires, which are thereby "repressed." Freud's most important discovery was that not only the dream but the whole mental life is not the result of chance, but is due to definite causes, just like other natural phenomena.

Freud gave the paramount place among the primitive instincts producing mental conflicts to sex. But the sex instinct as conceived by him has a wider significance than is usually understood by that term; it includes the love of the mother for her child, and other beautiful aspects.

One of the chief objects of psycho-analysis is to discover repressions. It is essential to understand what repressions are. While self-discipline cannot be over-valued, it must be realized that many people have difficulties seriously interfering with their happiness and efficiency, which cannot be dealt with by self-discipline. The repressions, which may be the cause, were driven down long ago, and are now deeply buried; they can only be discovered by some form of psycho-analysis. Those who have disciplined themselves have merely dealt with urges of which they were conscious; it is impossible to discipline an unknown force. The charge has been made against psycho-analysts that the theory that desires are natural justifies indiscriminate gratification; it does nothing of the kind. The analyst would point out, if necessary, that natural desires often conflict with the interests of the community, and that they must not have crude expression unless, while helping the development of the individual, it is certain they will not injure any other human being. The conflicting interests of the individual and the herd often constitute a serious difficulty, in which skilled help is necessary to find a harmonious solution, satisfactory for both. There are other opposing urges which may cause trouble till they are directed to a single purpose that satisfies both claims.

Jung, who at one period worked with Freud, broke away because he could not accept the theory that life is dominated by instincts, nor the emphasis placed on sex. There are other instincts as important as sex. He evolved a method of investigating dreams, which, while not ignoring Freud's theory of determinism nor the importance of instincts and past experiences, showed that present ideas often have more power than past experiences, and that aims may dominate instincts. He realized that Freud was a Jew, and therefore sprung from a very ancient civilization; in such a race

much that is natural is deeply buried, and only brought to the surface with difficulty. Jung never questioned the value of Freud's psycho-analysis for Jews, but felt, as a Swiss, that the Aryan race could often be helped more on other lines.

Freud's psycho-analysis involves a special technique which can only be learnt by submitting oneself to analysis, because its success depends largely on the personal relationship between the analyst and analysand, technically spoken of as the transference. rapport is so delicate that it cannot be maintained in the presence of a third party. Usually medical or surgical treatment can be learnt by watching a qualified worker, and later doing similar work under supervision. The impossibility of this with psycho-analysis makes a special demand on the analyst, and to some extent removes the ground for outside criticism. Freud compared the repressing force which prevents the determining instinct or desire from becoming conscious to a "censor," which disguises the real meaning of the dream by symbolism. He also makes a distinction between the dream narrative, or "manifest content," and the dream thoughts, or "latent content," hidden behind. The task of the analyst is to find the latent content; he does so by demanding continued free associations, till a satisfactory interpretation of the symbol is reached, the decision as to whether the interpretation is correct resting largely with the analyst. While many symbols are interpreted by free association, others are explained by a code, which gives a concrete sex value to many objects. During the interviews the analyst, as it were, hides behind a mirror, held up to the analysand to show him his real self; once the motive of the neurosis or irregular conduct is seen, it only remains for the analyst to give such help as he can in dealing with the cause. This is largely effected by the process termed "sublimation"—the turning away of repressed primitive impulses from their original objective, the pleasure of the ego, to work subserving social and cultured life. Psycho-analysis is essentially a reductive process, working down gradually to the recognition of the pleasure-principle in early childhood. There is a sequence which should not be broken: this usually necessitates carrying the analysis through to a conclusion, which may be reached in a few months, though in some cases a longer time is required.

The reasons which induced Jung to break away from Freud have been to some extent indicated. They are largely based on the observation that continued free association inevitably leads to sex. Jung saw that the unconscious is not merely a collection of primitive instincts and unfortunate experiences, but also contains aims for the future and indications of possibilities not yet achieved, and in

addition, inherited memories—archetyes—from previous generations. Recognizing in the unconscious much more than unpleasant memories and repressed natural desires, he saw no necessity for the conception of a censor, as he recognized that "the symbol is not merely a sign of something repressed and concealed, but is at the same time an attempt to comprehend and point out the way of the further psychological development of the individual." In a Jung analysis the interpretation is always made by free associations, there being no code of symbols. Taking the dream narrative as a picture of the present mental conflict or situation, and keeping the associations near the surface, so as to prevent them going down to sex, Jung found that they, like the manifest content of the dream, often point to duties neglected at the present time as determining factors in causing the neurosis or unsatisfactory conduct. A Jung analysis is mainly synthetic or constructive, rather than reductive.

The differences between Freud and Jung are fundamental and cannot be reconciled. Not only in the conception of the unconscious, but in the conduct of the analysis, Jung is different. For instance, a Freudian analysis is sometimes carried out in a darkened room, the analysand resting on a couch, while the analyst sits behind and makes notes of the free associations. In a Jung analysis the two sit face to face in the best light possible; both must be alert, and there is more give and take. The analyst makes no notes; if he finds the analysand worthy of such confidence, he endeavours to show him that he also is a very human individual, who has had some of the difficulties and drawbacks of the analysand, such troubles being part of all human experience. There is no argument, for that is fatal to any kind of analysis. His object is not to put anything into the analysand that is not there, but to draw him out and help him to see from the form of his dreams and his own associations what manner of man he is, especially what his possibilities are, and to realize that the chains which previously bound him are now lighter or even broken. There never can be any materialistic proof that the interpretation of dreams is correct; if it is, the analysand feels it, and accepts it. As with a Freudian analysis, there is a definite technique which can only be learnt by personal experience; but this is even more difficult to describe or indicate in a way that a third party could understand, for a Jung analysis is such a delicate living process that once it is put into words intended for an audience, and not for a special individual, still more when placed on a printed page, its essence has evaporated. Jung's aim is to develop the individual, so that he can make the best use of his talents, despite his disabilities.

With such differences it was inevitable that Freud and Jung

should part. Freud asserted that Jung was no longer practising psycho-analysis—a statement Jung accepted. To make this clear, Jung and his school call their method psychological analysis. This form of analysis makes even greater demands on the analyst, for Jung insists that not only must he be analysed before he starts, but also that he must continue his own analysis from time to time. as the only way of keeping free from bias. No one can ever see all round himself. The Jung method has an advantage in practice, in that once well started, say after ten or twelve interviews, it can be continued at intervals as opportunity offers. There is a mistaken impression that a Jung analysis is not so practical as a Freudian one, owing to the idea that dreams are often given a mythological interpretation. This is not correct. Certainly one at least of Jung's published works is very difficult to understand, but no lectures could be clearer than his. As for analysis, I know nothing more helpful in ordinary life than dreams interpreted on Jung lines.

In addition to Jung, Adler, another physician who joined Freud's original class of five, broke away, and developed a line of his own. His theory is that love of power, not sex, is the most important instinct. The root of all human conflicts, according to Adler, is the eternal struggle between the masculine and feminine principles that exist in everyone, urging them at the same instant to be both dominant and submissive. Although Adler's principle is important and his book helpful, it is not necessary to say any more for two reasons. First, as far as I know, no one in this country practises on Adler's lines. Secondly, the difference between Adler and Freud is not fundamental; Adler's analysis is reductive, and goes back to early childhood just like Freud's. The Adler principle is not overlooked in a Jung analysis, and probably not in a Freudian either.

For similar reasons I do not propose to elaborate the ideas of Dr. Beatrice Hinkle, originally a follower of Jung. In her book—
The Re-creation of the Individual—published two years ago, she seems to have broken away from Jung. But her method of analysis is synthetic, like Jung's. The chief difference seems to be in her classification of psychological types. Her book is both interesting and helpful, but there is no fundamental disagreement with Jung, such as would lead to the foundation of a new school. But I would like to quote from her the statement that "Analysis has provided the key which can open the door to the self-knowledge which is the absolute necessity for any further development of the individual."

Personally I associate myself with the Jung school. Some of those, however, who will speak later are well qualified to correct any misrepresentation I may have given of Freud's ideas.

Critics of psycho-analysis must remember there are two schoolsthe Vienna school of Freud and the Zurich school of Jung. Although the latter has adopted a different name, it is nearly always put in the same class—an unscientific procedure when there are fundamental differences. Neither can be judged by the results of the other. If one is unsatisfactory or incomplete, the other may be valuable. One may be a help to certain types and the other to different people. Again one might be of service to the present generation, and the other to the next. Time will show whether those who have gone through with analysis find it a help in their later life. There are many who have said: " If only I had known about this years ago, what a difference it would have made." The test is whether these are outnumbered by those who show it has done them more harm than good. But such evidence is valueless when given by those who have only had a shot at it, or gone to an untrained analyst. The confusion originating in the fact of two different schools is greater because much so-called psychoanalysis has been done by unqualified or incompetent practitioners. Hailed as a panacea at one period of the war for all psychological troubles, it was taken up by many who were either naturally unsuited, or who had no experience of mental defect or mental disorder, and who had the further drawback of very short training on special lines. When such practitioners in an excess of zeal started work on unfortunate cases of shell-shock, some of whom were mental defectives, others cases of mental disorder, and others so constitutionally inferior that they never could respond to an educative process, it was not surprising that the result was often disappointing, and sometimes worse. The failures of those who undertook this work without proper preparation remain, and are placed alongside the successes of capable workers, who are thereby discredited.

Some of the teachings of both schools can be used with benefit without submitting the patient to an actual analysis. Analysis must be reserved for a few, partly owing to the dearth of qualified analysts, and also because it is a special treatment not necessary or desirable for every neurotic. Neither the Freudian nor the Jung school analyse all patients who come to them. Many require treatment of a different kind, while others get the help they want from a few psychological talks. Such treatment can be carried out by medical practitioners who have not been analysed, but it should be recognized that it is neither psycho-analysis nor psychological analysis. It is sometimes said that every doctor is capable of doing psycho-analysis. He can do nothing of the kind, as an actual experience of what it is would soon show him. Treatment by those

who have not been analysed ought to be called mental investigation, or some other term to distinguish it from the work of those who have submitted themselves to training. If this were done it would be easier to come to a decision about the results attained by regular analysis. An untrained analyst, trying to analyse anyone else, has several handicaps: he is putting his patient through something he would not face himself, when the best form of psychotherapy will always be example; also he has only an intellectual experience, when an emotional experience is necessary.

Analysis is most suitable for neuroses and psycho-neuroses. The best results are obtained when the patient is able to continue his work and ordinary life, albeit with difficulty. How far it is available in cases of mental disorder is uncertain, the question being complicated by the fact that it is often impossible to differentiate between a neurosis and a psychosis. In some cases of incipient mental disorder, analysis will precipitate an acute condition: for this reason, and also because many so-called neurotics are suffering from diseased teeth or some other physical disorder, which must be treated first, and may be the only treatment necessary, analysis should be kept in the hands of our profession. Sometimes the course of the analysis makes it plain that there is a physical cause, previously overlooked. Analysis is not a form of treatment for acute mental disease, which requires rest, both physical and mental. Analysis may give the psychiatrist more insight into the difficulties of some of his patients, and so help indirectly. I have heard it said that in the recovery stage it facilitates convalescence, but have no actual experience.

Psycho-analysis and psychological analysis form a special kind of education, which confers its greatest benefit by preventing the development or recurrence of a mental disorder otherwise inevitable. A neurotic patient, therefore, would be well advised not to accept the old-fashioned prescription of a rest or change without some psychological investigation as to the kind of change necessary. The man who has a bad relationship with his wife, and is too interested in his typist, will only waste money on a trip to Egypt. It is no use trying to decide first whether there is a conflict in his life by asking a few leading questions. The conflict is not perceived by the patient, who is no better able to say what is the trouble, than the patient with a cough can save the physician the necessity of making a technical examination by volunteering the statement that he is suffering from pleurisy and not from pneumonia.

In considering the future of analysis it must be remembered that every important form of treatment has been received with distrust by the medical profession as a whole. It was so with anæsthetics and antiseptics, both of which are now firmly established, albeit on lines differing considerably from those along which they were first practised.

Like all important forms of treatment, analysis does involve a risk. Are there any safeguards? Among others the dream, the via regia to the unconscious, also furnishes a danger-signal. Dr. William McDougall, as he himself told us when lecturing in Birmingham, when he went to Zurich to Jung for psychological analysis had a dream in consequence of which Jung advised him to leave analysis alone. More than one of my patients has had dreams indicating there was some risk involved. In the same way a dream often shows when analysis has gone far enough, and ought to be discontinued, either temporarily or permanently.

In recent years two principles have been largely accepted in medical practice. One is that the more we know the better we realize we must go back to a very early stage to see the beginning of disease. The other is the interdependence of mind and body. Diseased teeth are an important factor in many illnesses, and not infrequently in mental disorder. But is the scientific thinker satisfied to leave it there? Does he not welcome the researches of Dr. Mellanby, who showed that carious teeth and teeth of faulty structure, predisposed to caries, may both be a sequel to depriving the mother of vitamines during pregnancy? The relation of mind and body is shown by the fact that a woman may develop heart disease, either because she has been infected with the poison of rheumatic fever, or because she has an unfaithful husband. So the man with melancholia may blame the germs of influenza, or the drinking habits of a wife who neglects her home and children. If it is scientific to investigate how the way was paved for the rheumatic fever or the influenza, is it unscientific to try to discover why the man was unfaithful and the woman drank? The failures may have been partly due to happenings in childhood, or to ideas influencing the mental life, and through it, conduct. It may have been that the man, without realizing it, was engaged in an unsuitable occupation, or was being stifled by the possessing love of a mother, who could never let her darling stand alone, or of a dominant father all out for his son realizing an ambition beyond his inborn capacity.

Germs are a well-known cause of disease. Many who are ill say their disorder began with worry. Not a few scientific practitioners consider that toxins and worry are the two prime factors in disease. If this is true the time has come when it is not fair to tell the hysterical and neurotic there is nothing wrong with them, when

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they are suffering from a disordered imagination. It is no help to tell them to forget their troubles and unhappy thoughts, when they say in all honesty they would give everything they have to someone who would tell them how. In many cases it is wise to seek out the roots of the trouble, and the unrecognized cause of the worry, and how to deal with it. This is the aim of analysis.

Analysis is both a form of therapy and the basis of a philosophy. The two do not necessarily go together. It is sometimes erroneously stated that analysis entails the special investigation indicated, and the acceptance of the theory. As a form of therapy, the only question is whether analysis works—it may, and sometimes does without the analysand understanding the underlying principles, or believing any of them, far less accepting them all.

## Discussion.

Dr. WILLIAM Brown desired, before saying anything on his own account, to express his appreciation of the paper which had just been read. It seemed to have covered the ground, in an elementary way, so thoroughly that, as far as he, the speaker, was concerned, nothing needed to be said, either in correction or amplification, except, perhaps, at the point where Dr. Potts emphasized the distinction between the Freud method of psycho-analysis and the Jung method of psychological analysis, and referred to Adler as a worker in a different category. It seemed to him, Dr. Brown, speaking from experience of analysis, and as one who had been analysed by an eminent Freudian, and who had analysed a number of others, that the analyses were the same in quality. One might use the method that Freud employed, and which one found so useful and helpful, getting the patient to lie on the couch, with the muscles relaxed, perhaps with eyes closed, and the analyst sitting at the head of the couch, out of sight. Or one might use the method which Jung preferred, carrying out face-to-face conversation. With different types of patient, one or other of these procedures was the preferable one. The question was, rather, when was one going to intervene in the analysis, and how would one do so? Jung, in speaking of prospective tendencies, of the life-task and the importance of the present, was not saying anything which would be denied by a Freudian. He was not himself either a Jungian or a Freudian; he was just a psychologist. So far as his direct experience of Freudian analysis went, he found it did include what had been emphasized by Jungians as specially characteristic of their method. Freud himself emphasized the importance of the analysis being as thorough as possible; therefore a Freudian analysis could last a long time, and leading Freudians claimed that analysis could be complete. On that the speaker would disagree. From general principles it seemed to him impossible to carry out a complete analysis on the lines of the principle that the Freudians themselves followed; and in practice it was difficult to find anyone who could claim rightly to have been completely analysed.

In supplementation to Dr. Potts's paper, perhaps he might be allowed to say a few words on Freud's most recent work. were probably aware that Freud was now emphasizing, in his libido theory, the importance of the narcissistic libido, and was now attempting to explain difficulties of evolution in the moral life in terms of libido distribution. In one of his most recent pamphlets. Freud endeavoured to explain conscience in terms of the ædipus complex, and so introduced. Dr. Brown considered, a new movement within his system. Hitherto Freud had been strictly psychological, and had been considering simply the sequence of mental process in time, apart from questions of valuation; and now he was using that psychological method to attack problems of moral valuation. In the speaker's view there was here a real danger, on the theoretical side, of subordinating the higher to the lower, finding in certain cases of depression and certain forms of psychoneurosis great self-depreciation and self-blame—an over-conscientiousness. Freud considered he could explain that in terms of the ædipus complex, identification, etc., and in that way get the origin of the conscience from the ædipus complex. A leading Freudian, when asked about free-will and the dictum of Kant-"I ought, therefore I can "-said he thought it could be explained in terms of the ædipus complex. Indeed, Freud himself has said so. That seemed to be putting the cart before the horse. There was a feeling of obligation that was pathological, and according to Freud that could be explained in terms of early experience. But if one considered the implications of obligations, one found that they were not concerned with time, but constituted a mental attitude which was fundamental, although it could be, in its workings, disturbed in the course of an individual life. So one would say that relationships in very early life towards father and mother, brothers, sisters, etc., might have an important bearing on the later development of the moral feelings and the emphasis of so-called moral emotions, but that the experience of obligation itself was not touched. Experience of obligation must stand, just as the experience of knowledge must stand; just as knowledge could not be explained in terms of preceding experience, so obligation could not be explained merely in terms of earlier associations and past experience. He merely mentioned that point because it

was a very recent addition to Freud's theory, and it was of some importance on the practical side.

That brought him to his final remarks—that analysis should be distinguished from the evaluation and general discussion between doctor and patient; the two were distinct. In the analysis one was overcoming dissociations of one kind or another, and, in addition, one was revealing to the patient the unsatisfactoriness of his philosophy of life, and helping him to find another philosophy of It did not mean that one was to teach him philosophy, but rather to encourage him to discuss the matter with one from the point of view of a general philosophy. And in a complete therapy one needed not only reductive analysis, but a general philosophical treatment. Therefore he agreed with Dr. Potts when he said that everybody who specialized in this branch of therapy should himself be analysed, and before he undertook a long analysis he considered it was preferable that he should have considered life from the philosophical point of view, and should come trained as thoroughly as possible in the view-points of moral philosophers. In that way he could give further help of a truly psycho-therapeutic nature to the patient.

Dr. A. Wohlgemuth: As a psychologist I am interested in psycho-analysis principally from the view-point of pure science, that is to say, I am concerned whether the theory, or rather doctrine, is based upon scientifically proven fact, or whether its method is strictly scientific. What its value is as a therapeutic intervention I do not know, nor am I competent to give an opinion on this point, although I do know of cases where harm has been done. Neither am I concerned with its later development until it has been shown that the fundamental principles are established on a scientific basis.

The unconscious mind.—The term is a dangerous one on account of the loose use made of it. Consciousness, as I conceive it, is a process, just as movement or digestion are processes. Perception, e.g., thoughts, ideas, feelings, strivings, etc., are such processes of consciousness. Before it occurred, a process had no existence, nor has it an existence when it has ceased. These processes of consciousness are functions of certain parts of the central nervous system. After certain neurones have functioned in a given combination and sequence, there is left behind a disposition of a functioning of these neurones in similar combinations or sequences. This disposition is termed memory. An analogous disposition is, as Ewald Hering formulated it, the property of all organized matter. We are born with certain dispositions as to growth; we tend to resemble our parents and ancestors, in stature, colour of hair or

eyes, complexion, etc.; we are born with certain dispositions as to instincts, character, etc. During our development environment acts upon us, creating new dispositions which may influence and modify the older ones. If we wish to call the sum total of these dispositions of certain parts of the central nervous system at any time the "unconscious mind," we may do so; it is purely a question of terminology; but, as I said before, it is a dangerous term, because, forgetting our definition, we are apt to infer that the "unconscious mind" is similarly constituted to the "conscious mind," that there are unconscious thoughts, wishes, etc. That is to say, as thoughts, wishes, etc., are all conscious processes, so there exist unconscious conscious processes, which is evidently absurd. Behind a substantive, as Freud's former colleague, Breuer, rightly said, we tend to assume a substance and then mythology is complete.

Freud's discovery.-To credit Freud with the invention of the "unconscious" is certainly not correct. The conception is a much older one, and was indulged in by speculating metaphysicians, being a very convenient deus ex machina, occupying in psychology about the same place of importance as the Deity did in biology. Any difficult or perplexing problems could so easily be solved by these means. What can, however, be credited to Freud is the alleged discovery of the means of penetrating into the "unconscious" -of making it accessible. This is the great epoch-making discovery of Freud, on the strength of which he classes himself with Copernicus and Darwin. As you know, his method of arriving at the unconscious is based upon the assumption that by taking any part of a dream which he calls the "manifest dream content," and abandoning ourselves, so to speak, to free associations, we arrive at the "latent dream" content, i.e., the thoughts or ideas which gave rise to the manifest dream content. Now if this were all and the patient were left entirely to himself, as the subject of an experiment in the laboratory, nothing would come of it, as nothing comes of it in the laboratory when the experiment is conducted by the experimental psychologist. But the psycho-analyst guides his patients. In Freud's words, "the physician gives in psychoanalysis every time to the patient the respective expectation-ideas (Erwartungsvorstellungen), by means of which he (the patient) shall be enabled to recognize that which is unconscious and to seize it; on one occasion he gives them more, and on another less plentifully. There are first some cases that require more help, and others that require less help. Without such help no one can get on." Now, if that is not suggestion of the rankest and grossest form, naked and undisguised, I do not know what suggestion is. I said just now that Freud's method of penetrating into the "unconscious" was based upon the assumption that you are tracing backwards the chain of associations that connects the alleged latent dream-content with the "manifest dream content." It is an assumption pure and simple; there is no proof whatever for it; on the contrary, experimental evidence is absolutely against it. Nor does Freud attempt to adduce any evidence. As proof he relies upon five points which he gives in answer to some imaginary critics. These points are:

- I. The impression that is produced upon the subject by the interpretation of the dream. Now what evidential value can this possibly have? Doubtless, the impression is a tremendous emotion, a terrible shock to a neurotic patient when he is told that, guided by the psycho-analyst, he himself has produced out of his "unconscious" the awful unquestionable fact that he has incestuous desires for his (the patient's) mother or her (the patient's) father. But what is the evidential value, I ask again?
- 2. The surprising connections between the various and apparently disconnected dream-elements of the manifest dream-content. What is there surprising when the patient, always under the guidance of the psycho-analyst, by interpolating but very few new ideas, can connect practically anything?
- 3. The improbability that the interpretation of the dream which so completely covers and explains and fits into the life of the patient could be obtained otherwise than by tracing back previously established connections. Now, if the patient were left entirely, absolutely entirely to himself, and would reel off these "free associations," there might be some evidential value, but under the guidance of the psycho-analyst the expectation-ideas are given every time, and these vary according to the school to which the psycho-analyst belongs, and the result likewise varies. Further, Freud analysed imaginary dreams, which had never been dreamt, and where no free associations were furnished, yet he obtained a result which completely covered, explained and fitted into the life of the novelist's hero. I did the same with Pharaoh's dream, and was equally successful.
- 4. The procedure in dream-interpretation is identical with that of the reduction of hysterical symptoms, where the correctness of the procedure and the truth of the theory is demonstrated by the immediate disappearance of these symptoms: Putting it the other way, Freud's contention is this: There is a certain procedure which causes hysterical symptoms to disappear; this procedure professes to trace the causes of the hysterical symptoms, and, therefore, it is correct to say that the found professed causes are the real causes, and that their discovery effects the removal of the

symptoms. The procedure in dream analysis is identical with the procedure of tracing the causes of hysterical symptoms, and, therefore, the ideas and thoughts traced are the latent dream-content. It is quite superfluous to examine the more than questionable logic of the later inferences; it suffices to point out that there is a fallacy of non sequitur at the very beginning. As there are other procedures that cause hysterical symptoms to disappear than that of tracing their alleged causes, it does not follow in the least that the traced alleged causes are the real causes. The tracing of causes may be a case of suggestion pure and simple.

5. The last of Freud's five proofs is this: He says that it is demonstrably false that we abandon ourselves to aimless thought-process when, as with the dream interpretation work, we drop our voluntary thinking and allow play to involuntary ideas. It can be shown, he continues, that we can only renounce those end-ideas that are known to us, and that with their termination there rise immediately to power end-ideas that are unknown, or, as we incorrectly say, unconscious, and which determine the thought-process of involuntary ideas. But this is exactly what Freud undertook to do, to demonstrate the falsity of aimless thought and to show the existence of unknown end-ideas. But where is the demonstration and the proof? They are, as always, conspicuous by their absence. As usual his proof consists in a reiteration of his assertion.

Elsewhere Freud attempts to prove the existence of unconscious thoughts, etc., by the analysis of numbers. Now this is a great step forward, because it is of the nature of an experiment that can be repeated at will and which lends itself to control experiments. Put down any number that comes into your mind, he says, and you will be able by analysis to show that it has been prompted by your unconscious, and he proceeds to give several examples. All this you know, and I need go no further into details. All I wish to say is this: had Freud had the least notion of scientific method, it would have occurred to him to perform control experiments. He would have asked other people to supply him with numbers, or he could have obtained them by hazard methods. He would then have found that it makes no difference whatever whether the number was supplied by his "unconscious" or obtained otherwise.

There is, then, nowhere in the whole of the vast—alas too vast—amount of psycho-analytic literature to be found a shred of scientific proof for the foundation upon which the superstructure of the psycho-analytic doctrine has been built.

It is, however, contended—and this brings me to the last point on which I wish to dwell for a few moments, namely, the necessity of

analysis of the analyst—that if I had been psycho-analysed myself I would have become convinced of the truth of the doctrine. certainly very difficult to give, or refuse, assent to this statement. Not being constituted differently from anybody else, it is quite conceivable that had I renounced my critical faculty and delivered myself body and soul at the beginning to the powerful suggestions of the psycho-analyst, I might have succumbed to the long-continued and reiterated suggestion. But when a man has made an objective study of the doctrine and has convinced himself of the utter disregard of scientific method, of the specious reasoning by analogy, of the baseless assertions, the promised proof which never materializes, I have very positive doubts that an analysis can convince him. He will be warned against suggestion, and thus make the task of the psycho-analyst an impossible one. theless I am quite willing to submit to an analysis if there be a psycho-analyst desirous of undertaking it, and am prepared to give my services free of any charge.

Dr. M. Hamblin Smith: The present position of psychology is full of interest. So also is the opposition to the modern developments of psychology. Neither can be understood without some preliminary consideration of the history of modern psychology.

The early nineteenth century has been described as the culminating point of philosophy. Later, there came a time when, as Helmholtz said, those who professed physical science cared nothing for philosophy, while the philosophers despised physical science. Still later, physical science appeared to reign supreme. At this time modern psychology had its birth. And, at its inception, modern psychology had certain difficulties to face—difficulties which it has not, as yet, fully overcome.

In the absence of any organized system of psychology, other sciences had made invasions of its sphere. And psychology found these other sciences in the occupation of positions from which they resent the attempts of psychology to eject them. This situation is perfectly natural. In the absence of any science, man is bound to provide himself with some empirical explanation of the phenomena with which that science should deal. The situation had occurred, in the case of astronomy, at the time of Copernicus, and, almost in our own days, it had occurred with biology at the time of Darwin. The subject-matter of psychology being, above that of every other science, of supreme importance to mankind, many other sciences had occupied positions which belonged to psychology. We may instance the case of the science of law, which has been obliged to lay down some supposed rules of human conduct, and resents the

intrusion of psychology into its sacred precincts. This is not the place to enter into any discussion on the vexed question of "criminal responsibility." Nor is it my present task to consider how modern psychology has affected our conception of anti-social conduct, or to speculate as to how psychology may ultimately modify our treatment of such conduct. But here, as elsewhere, psychology has its limitations. It is the task of psychology to investigate human conduct, and to ascertain the laws which govern human conduct. There has been laid upon it the obligation of making public its well-considered findings, and of pointing out how these may be of service to society. It may criticize the rules of law, and may show that these rules do not achieve their object. But psychology is the handmaid and not the mistress of society. It is, ultimately, for society to decide in what way it will deal with its problems. It is no part of the duty of psychologists to grumble that their recommendations are not immediately carried out.

Again, at the time of the birth of modern psychology a mechanical conception of the universe was in vogue amongst scientists. Materialism had little use for a science which purported to deal with the mind. Even to-day, although the cruder form of materialism is, perhaps, no longer held, epiphenomenalism is still very popular. And those who regard consciousness as but the epiphenomenon of matter are not likely to have much sympathy with a science which regards psychical processes as of, at least, equal importance with physical processes. I do not think we fully realize how strong a bias many senior men have against psychology, on account of the assumptions of the sciences upon which they were brought up. Just as with law, certain positions have been entrenched, and it takes some boldness to attack them. It seems quite clear that all our thought and work will be sterile, unless we have made up our minds as to the view which we take of the psychophysical relation. We must hold some theory on this subject. if only as a working hypothesis. It is not necessary for me to enter into the question propounded by Prof. McDougall, as to whether our choice does not lie between animism and some form of parallelism, although the view known as phenomenalistic parallelism, as expounded by Spinoza, is most attractive to me, and seems to fit best with the psycho-analytic theory. Although that theory does not depend upon any particular view as to the psycho-physical relation, we must, however, realize that nothing but confusion can result from the attempt to mix psychological and neurological considerations. Some anti-Freudian writers are so violent in their opposition to the "unconscious" that they appear to deny th existence of the "mind."

In this connection, we must not forget that recent events have greatly shaken the former prestige of the physical sciences. Without going so far as does Prof. Wildon Carr (I), who describes the enunciation of Einstein's theory as the fall of the Bastille of physical science, there can be no doubt that our position as regards physical science requires careful reconsideration. But the most dangerous foe of psychology is the "man in the street," of whom we hear so much, for whom the major part of our literature and the whole of our newspaper press exists, the "man of plain sense," to whom Berkeley so confidently and so vainly appealed. done just what the sciences to which I have alluded did. provided himself with what is, to him, a complete and satisfactory explanation of his habits, conduct, origin, and destiny, such explanation consisting, of course, largely of rationalizations. And there is another reason why the ordinary man detests psychology. be that the proper study of mankind is man. But there is no study from which mankind is more ready to play truant. almost seem that the last thing man desires to know about is Psychology is the science which would teach man about In this teaching, however, it gives severe blows to man's himself. self-esteem. It destroys, for example, the view that man is distinguished from the rest of the animal world by being, above all else, a reasoning creature. It shows how much of human conduct is instinctive.

The relations between modern psychology and religion must be approached warily. But the matter cannot be ignored. Psychology studies religion, as it studies every other department of human thought, with no preconceived theory as to the truth or falsity of particular religious beliefs. It investigates and classifies religious experiences. It has something to say as regards the origin of the The time has long passed since science looked upon religious idea. religion with, at best, good-humoured tolerance. I would say that the psychologist cannot study religions too much. He will find much of intrinsic interest, much that throws light upon his problems. The sole protest I would make is against the attempt, which appears to be current in some quarters, to get one particular variant of the Freudian theory taken under the ægis of religion, with the implication that this is the brand of psychology for orthodox believers to accept, all other theories being impious and heretical. Against this most unholy alliance, the danger of which is not imaginary, all psychologists should take their stand.

Freud's discovery was originally promulgated as a therapeutic procedure. As such it has its own unique value, although its application is subject to certain limitations, to be alluded to later. Had

it been no more than a therapeutic procedure, it would have met with no special opposition, beyond the inevitable resistance on the part of senior members of our profession to anything novel. It would have been left to time to prove or to disprove its value. The magnitude of the present uproar bears witness to the importance of Freud's hypothesis. Those of us who most understand the nature of this hypothesis are least surprised at the violence of the opposition, although we may sometimes complain of the unfairness of our opponents.

Freud's hypothesis goes far beyond the limits of any system of therapeutics. It can, to my mind, only be compared in importance to the hypotheses of Copernicus and of Darwin. It has given us, not so much information about hitherto unknown facts, as an entirely new orientation of our knowledge. The opposition to any great theory passes through certain phases. There is the stage at which the theory is ridiculed as obviously absurd. There follows the stage at which it is abused as contrary to established and orthodox knowledge, and therefore necessarily untrue. Finally, we have the stage of general acceptance of its principles, combined with the assertion that there is, after all, very little new in it. The first of these stages is past, it being admitted by all that the psychoanalytic theory has to be reckoned with. We are, at present, witnessing the concurrence of the two later stages. On the one hand there is the ferocious opposition, due to the revolutionary character of the Freudian hypothesis. On the other hand, it is almost impossible to take up any recent book on psychology, by whomsoever written, without finding the conceptions of mental conflict, repression, sublimation and the like accepted as part of established knowledge, even although Freud's name is not mentioned, and even although the writer would repudiate the title of Freudian.

To what, then, is the ferocious opposition due? There are many causes, of which we may briefly consider a few.

i. The Freudian theory deals with a normal, and not exclusively with a pathological psychology. The processes which, under certain circumstances, produce a psycho-neurosis, operate in every individual, and that without exception. This is one great occasion of offence. People would have been quite content to believe that the process of repression occurred in the abnormal subject. They are by no means willing to believe that this and similar processes occur in themselves. To take one example, that repressed desires may be replaced in consciousness by their opposites is well established. But see how much this implies. People are always ready to believe themselves to "compound for sins they are inclined to,

by damning those they have no mind to," because they make a mental reservation that the sins they are inclined to are much more venial in character than are those which they condemn. It is quite another matter when they are told that conscious condemnation may arise from unconscious desire. But see what an insight the theory gives us into the origins of human conduct.

2. There is Freud's treatment of sex. To the scientist there is nothing new in the position that the sex instinct is of pre-eminent importance. Michael Foster (2) spoke, many years ago, of human actions as being "but the by-play of ovum-bearing organisms." Freud has demonstrated that the sex instinct does not arise de novo at puberty, but that elements of sexuality are present from the earliest stage of existence. But the subject of sex has formed our most cherished taboo. We were, no doubt, always ready to acknowledge the importance of sex in the "abnormal," the "depraved." Matters are quite other when we have to realize its importance in ourselves. But the theory helps us enormously in our comprehension of human conduct. Consider the light we have obtained from the hypothesis of the gradual development of the sex instinct, and of the various stages of object-incestuous. narcissistic, homo-sexual, etc. The fixations which may occur and the regressions which may take place at any of these stages explain much that was, previously, wholly obscure. The bisexuality which exists in all of us is of the utmost moment. So also is the development of fantasy, as it has been worked out by Ferenczi (3), especially when we consider that, as I believe, the characteristic fantasies of past stages are not destroyed, although they may have been repressed, and that they still continue to influence conduct, often in important ways. It must, surely, be admitted that we pay a heavy price for some of our conventional attitudes on sex questions. The danger of some of our repressions must be evident. But these considerations do not imply that free and unrestrained licence should be given to unsublimated sex expression. It is clear that, under the conditions of almost any imaginable civilization. the direct expression of this instinct must be much interfered And it seems strange that those who are accused of "seeing sex in everything," and who do, in fact, realize how much of social progress has been due to sublimated sex activity, should be supposed to advocate the free expression of sex activity in one particular way alone. At the same time, I believe it to be, in some ways, unfortunate that certain terms, which long association has caused to possess an unpleasant connotation, should have been employed to denote certain phases of sex development. I have urged, elsewhere, that conatus, used in Spinoza's sense, is preferable to libido (4).

- 3. We have Freud's determinism. It is not necessary for me to stress the fundamental position of that doctrine in the psychoanalytic system. Nor am I, fortunately, required to enter into any discussion on this subject. I admit that, in a sense, determinism is damaging to man's self-esteem. But I also believe that determinism, when fully grasped, is the most inspiring doctrine which we can hold. Determinism is not the same thing as fatalism, and in no way implies that we should adopt a policy of laissez-faire in relation to anti-social manifestations.(5) Society is bound to attempt to protect itself against such manifestations, although our conception of what is anti-social varies from time to time. Our knowledge of the causative factors of human actions does not imply that anti-social actions should be left uncorrected, though it does imply that corrective treatment should take cognizance of the causative factors. We treat the insane with no less success now that we recognize that they are not possessed by devils. Had we listened, in past times, to the conservatives of that day, we should still be exorcising demons, and burning those who questioned the propriety of our so doing. It is certainly true that determinism rules out the idea of blame, and so deprives man of a hitherto valued support to his self-esteem. But this does not affect practical action, although it should affect the spirit in which such action is carried out. In this respect it is interesting to reflect that the verdict of psycho-analysis is the same as the verdict of Christianity —that if we judge at all we must judge of ourselves alone.
- 4. There are the alleged dangers in the practice of psycho-analysis. I need not labour the point that dangers may occur in any form of medical treatment. There are dangers in other practices. Still, I would not wish to minimize the possible risks of psycho-analysis. From time to time we hear harrowing tales of the damage done to this or that patient. It may well be that some of these cases were unsuited for analysis, and that some have been treated by incompetent persons. In one recent case, of which much was made, it transpired that no analysis had been undertaken. But let us assume that harm has, on occasion, been done. What of the reverse of the medal? There are those who could tell of the happiness, and the power of usefulness, which they had not known for years, and which all other forms of treatment had failed to give them, brought to them by psycho-analysis. There are those who have been freed, by psycho-analysis, of phobias and of obsessive practices. impossible to expect these patients to submit themselves to investigation. And in the absence of such investigation the opponents of psycho-analysis, while making the most of alleged failures, would say that there was no sufficient evidence of cure.

I do not claim psycho-analysis as a short and easy road to the rectification of all social evils. Psycho-analysis is a hard road to travel, hard for the patient, and hard (although this is often overlooked) for the analyst. It is clear that the long time necessarily occupied by the treatment, and the comparatively few competent analysts existing at present, must limit the use of this method as a therapeutic procedure. I believe that, as with infectious disease, more is to be looked for by methods of prevention. In the light given us by the psycho-analytic theory, we know much about the way in which mental troubles originate. By the application of our knowledge we shall be able to do much to prevent the development of mental troubles. The real value of Freud's great hypothesis will be found in the school and in the home.

Finally, it has been objected that Freudianism is a pontifical system. Even were this true, there would be, at least, one advantage: a pontifical system is a living system; it does not confine us within the musty traditions of past ages; it allows of development. Such a development has undoubtedly taken place in Freud's thought. But I do not, of course, admit that such a description of psycho-analysis is accurate. I believe that controversy is a most healthy thing, and that the ultimate end of the present discussions will be peace. Not even from those whom we most revere are we prepared to accept any system as final. For of wisdom, especially of psychological wisdom, we may say, in the words of the son of Sirach, that the first man knew her not perfectly, no more shall the last man find her out.

References.—(1) A Theory of Monads, 1922.—(2) Text-book of Physiology, vol. iv, 1891.—(3) Contributions to Psycho-Analysis.—(4) "Spinoza's Anticipations of Modern Psychological Developments," Brit. Journ. Med. Psychol., 1925.—(4) Vide Sir Frederick Pollock, Spinoza's Life and Philosophy, 1912, pp. 189 ff.

Dr. E. MAPOTHER said he did not propose on the present occasion to discuss the theory of psycho-analysis at all, but would like to submit one or two questions. He thought the theory had been discussed almost ad nauseam for about twenty years. One heard the same thing over and over again, and only very rarely did one hear even a new joke about it. What concerned the members of this Association were the results of treatment, and the question was whether results were obtainable by the special methods of psycho-analysis which were not obtainable by other methods. As to that, after twenty years he was in doubt. It was extraordinarily hard to be sure that the special methods of psycho-analysis were adhered to, even by those who were professed and practising psycho-analysts, because he thought the essence of the matter was free association and the attempt to trace anomalies to

deviations of the infantile sexuality by that method. And at the present time, he thought, truly free association was scarcely ever attainable. The patient's associations were directed by the knowledge of what was expected, and he thought the intervention of the analyst was generally much greater than, in theory, it should be. He thought, too, that what was really most wanted at the present time was an unprejudiced record of results, of changes seen in patients who had been examined before and after by people who were not professed and practising psycho-analysts. A great deal was heard of remarkable results of the method. But even those who were in a fair position to see them, if they occurred, did not see many of them, and he had not seen them. In the main, it was not a matter of psycho-analysis; in the majority of cases it was not their special method, it was not the removal of repressions, it was not tracing to infantile deviations, but it was the amount of time given to the patient which was the effective thing. The amount of time devoted to it and the study of the patient led to an understanding of him and to a capacity to control him, which was the same in kind as that underlying all psycho-therapy. The day on which the patient was more confiding and more receptive and malleable counted, and the more time that was given to the patient. the more one knew about him and the more one could do for him.

When the Maudsley Hospital was opened he encouraged, and he was still encouraging to the utmost of his capacity, the use of psycho-analysis, though he was not an adherent of the method, but he thought there was nobody, who was not a convinced believer in advance, who was any more a convinced believer now. There was hardly a single case in that institution in which results were obtained by psycho-analysis which could not have been obtained by other methods. He thought that was the essence of the matter; that one gave an enormous amount of time to the patient in psychoanalysis, and at certain times the patient was more receptive, and at such times he could be more influenced. But the tracing back to infantile associations seemed to be of relatively little importance.

Dr. H. CRICHTON-MILLER said that psycho-analysis was the term which Freud coined for his own theory and technique, and there was little to be added to what had already been said at this meeting about psycho-analysis. He wished, however, to make two remarks.

In the first place, he differed from Dr. Potts when he claimed that Adler's theory was entirely covered by the Freudian system. That seemed to be an injustice, as Adler had a definite contribution to make. He, the speaker, associated himself with Dr. Hamblin Smith when he said that Freud had given the profession a new

outlook on psychology, which was only comparable with the beginnings of evolution in biology. There were three things which could be usefully said about psycho-analysis as such, not its development. The first was, that it was not primarily therapeutic; it was a technique for the investigation of the human mind, and therapy was admittedly a secondary factor in it. Furthermore, the technique of psycho-analysis absolutely excluded not only the treatment of, but the discussion of, physical symptoms and physical examination on the part of the analyst. At that point he thought he and his colleagues had a criticism to make. In these days, when more and more it was realized how important was psychophysical interaction and how impossible it was to deal with the mental life apart from the physical life, any such limitation was a very serious matter.

The second remark he wished to make about psycho-analysis was as to its relation to evolution. Its relation to evolution was a very important matter, especially for biologists. In "Beyond the Pleasure Principle," Freud had definitely challenged the whole evolutionary conception. In it he said, "The final goal of all organic striving can be stated to be not life but death." In criticizing that statement T. W. Mitchell made a very pertinent remark, namely, "The criticism which will, in the end, invalidate Freud's arguments may come, not from those who dispute the accuracy of its deductions, but from those who question the fundamental assumption on which all his reasoning rests, i.e. his assumption that all phenomena of life and mind can be interpreted in terms of physical science."

The third point Dr. Miller would make about psycho-analysis was one which perhaps interested his hearers least of all, namely, the complete failure of the method to account in any way for the creative factor in the mental life. Freud only denied its existence. Ernest Jones said, "We have no experience in either the physical or the spiritual world of creation. . . ." An ipse dixit of that sort clashed so much with his, the speaker's, own professional experience that he simply could not accept it. He felt that, somewhere, the system which had led to that conclusion had gone off the rails.

In discussing the development of psycho-analysis one might ask oneself not only why psycho-analysis was unpopular—Dr. Hamblin Smith had very ably discussed that point—but one might well ask why it was popular; it was a pertinent question. And it must be realized that in studying recruits to the Freud school there were two recognizable types, and perhaps some members present had recognized them for themselves. The first were the

hangers-on, the people who would always be attracted by a new cult or craze which seemed to be a panacea, something which offered the possibility of intellectual caste. They were people who enjoyed the destiny of the human gramophone, who served that pontifical aspect of Freudism which had been referred to, and which one heard debated.

The second type were the real intellectualists who followed Freud, and he thought they had one feature in common. It might sound irreverent to say it, or it might sound irrelevant, but they were the intellectualists who had a particular desire to escape from the belief that life was an adventure. There was a type of mind, thoroughly intellectual and not at all to be despised, which did enjoy the feeling that life was "not a bus, but a species of tram."

But if one turned from psycho-analysis to its development and said no more about the Freudian claims and the Freudian system, per se, then one came to this question, as to whether in therapeutic work one did accept, or did not accept, the position of the unconscious motive. Dr. Mapother had just now very definitely, withal very gently, proclaimed himself a sceptic. For his, the speaker's, own part, it seemed to him that the scepticism which Dr. Mapother had expressed was out of date. He did not think one could now hold a position like that. It must be admitted that some neuroses could be cured, and some psychoses could be averted, only by a therapy which took cognizance of the unconscious factor, with or without the question of symbolism, and that was, after all, owing to Freud. If one was going to accept merely the original doctrine of repression, nothing more, one could at least assume the attitude of detachment towards the elaborate development of the Freudian school, towards the developments of that school which Dr. Potts described, towards the differences of theory. But the central point, as to whether the unconscious motive had to be taken into consideration in one's therapy, for certain cases, was what mattered. In the distant years when this century was dawning, before the speaker had a motor licence, he possessed an automobile for going about in his country practice. On one occasion he was trying to put right a defect which had caused a stoppage of the automobile, and was in an unpresentable state, when a colleague perhaps he ought to say a rival—passed in a comfortable little dog-cart drawn by a very good cob, and as he passed there was on his face a sardonic smile. He got there first, before the speaker. The point of that for the present occasion was that there were many senior members of the profession who were rubbing themselves all over because they were getting "there first" in their dog-cart to-day. He, Dr. Miller, had lived to attend this meeting, in which

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some of the members had turned up in their motor-cars; probably none had arrived by the aid of the quadruped. That, he submitted, was a pretty valid analogy. What mattered was, not whether his rival was driving a dog-cart, or was tinkering with a mesozoic motor-car; what did matter was his attitude towards the coming principle. No motor-car on the streets to-day had any sort of resemblance to the contraption he, the speaker, had in those early days, but it worked on the principle of internal combustion-when it worked at all—and most members had arrived at this meeting by the help of one of those engines. The rival practitioner was enjoying the very easy opportunity given him by the mishap of criticizing the futility of this comparatively new contraption which the speaker had; he was delighting in his ability to arrive by the oldfashioned method before his rival. No doubt some of the members present had had opportunity, by methods of persuasion, rest and massage, to cure patients whom analysts were alleged to have attempted to cure, and they might derive pleasure therefrom. did not want to grudge them that pleasure, but he urged that, in this matter, the profession should be on the side of the coming principle, for he certainly regarded it as such.

Prof. G. M. Robertson said he did not speak as an expert on this subject of psycho-analysis, though he did not regard himself as an outsider. He thought it was of some advantage to be able to take a somewhat detached view of the matter.

He wished to say at once that he regarded Freud as one of the greatest psychologists and one of the greatest discoverers in the realm of knowledge who had ever lived, comparing him with the greatest names in the ranks of discovery-Darwin, Simpson, Lister. Like Freud's, their work was full of mistakes, and no man could strike out an absolutely new line, throwing new light on complex problems, without making errors, which had afterwards to be rectified. But if a broad view were taken of what Freud had done, it must be admitted that he had shed a new light, that he had provided the key which opened problems of the mind, such as had never been presented before. The theory of evolution did not remain to-day in the same position as when Darwin first proclaimed it; anæsthetics differed to-day from what they were when Simpson discovered chloroform; while aseptic surgery to-day was a totally different thing from the antiseptic surgery which Lister introduced. He himself remembered the time when he had to sit beside the patient and continually spray the area of an operation. not seen in operating theatres at the present time, yet it was an everyday occurrence when he was a medical student, and no one,

and certainly not he, would belittle the work which Lister did. In the same way, Freud, in spite of any mistakes which he may have made, could be assured that his work still remained of the same value as was the work of those other great discoverers. Freud's work on the interpretation of dreams was one of the most wonderful revelations which had ever been published. His fundamental ideas had been adopted by many, often without acknowledgment to Freud, and the work of these people was essentially the work of Freud. Many of those who had followed that master called themselves successors of Freud rather than followers of him.

No doubt Jung had introduced many new ideas which were of advantage, but his system of psychological analysis would not have come into being unless Freud had laid the foundations of it.

He agreed with what Dr. Mapother said, that not one method alone should be adopted; in psycho-therapy every method should be used. One method would suit one patient, another method another patient. He believed Dr. Potts said the same thing. The patient might be amenable at one time and not amenable at another. Therefore he thought all the methods which had been presented to the profession from various sources should be held in readiness to be adopted as occasion required. He thought that those who declared themselves followers of Jung, for example, and antagonists of Freud's ideas, were following a very narrow course; and if every method were adopted there would be far better results than from restriction to one. Indeed, those who declared themselves as followers of Jung, and not of Freud, were possibly labouring under a degree of transference.

There was no doubt that employment of psycho-analytical methods was of more value from the therapeutic point of view in dealing with neuroses and psycho-neuroses than in pure psychoses. One required a great deal of co-operation and a great degree of intelligence on the part of the patient, and these were most frequently obtained in those who suffered from neuroses and psychoneuroses. Still, he thought that in a certain number of cases of the psychoses it was of therapeutic value to the patient. Even if it was not so, it gave such an insight into the psychology of the patients, their delusions and weird actions, that he considered the theories of Freud had been of the utmost value to psychiatrists, and never a day passed when he examined patients that he did not make use of one or other of the various views and theories that Freud suggested in the interpretation of the cases.

He also wished to state that although Freud and Jung had produced a technique of a valuable character to enable those practising it to sound the depths of the unconscious mind, psycho-therapy had been used at all times in the treatment of mental patients. There were many physicians engaged in the Freudian treatment of psycho-neuroses and neuroses who did not give sufficient credit to the work which had been done in the past by mental physicians. It had been held up as a reproach that in the past mental physicians did nothing for their patients; it had also been said of mental physicians that they had no pathology to account for the symptoms of the patients, and it had now been found that in both matters they had been entirely in the right. They were employing every method of psycho-therapy which was available to the medical man, and with success, and the disturbances of the patient were not physical and anatomical, but could be explained in terms of psychology in most cases. Cases formerly passed through the hands of neurologists, who ignored them because they did not discover signs of organic disease. Formerly they preferred cases with an organic origin, and disliked those which had a mental origin. Only now had they adopted the methods of Pinel, namely, moral treatment or psycho-therapy.

He also wished to say, in conclusion, that he thought there was a tendency, on the part of certain psycho-analysts and others who dealt with functional cases, to belittle the good that was being done in mental hospitals. Were it not that there were in mental hospitals many cases of organic disease, senile insanity, epilepsy, general paralysis and imbecility, the percentage of recoveries in those institutions would be very high. Dr. Potts mentioned a patient who came to him and who had a dream in which she imagined she was shut up in a cell with no windows, doors or any crevices, and apparently that was her conception of a mental hospital. had often had patients who expressed the same sort of idea. dream did not represent a mental hospital, but represented the difficulties the patient was surrounded with which could not be overcome. These patients could be helped by the mental physician, and they completely recovered when their difficulties had been solved for them.

Dr. M. A. Archdale spoke chiefly about the great value of the treatment of mental disorders by suggestion when applied systematically and varied to suit individual cases.

[The full expounding and demonstration of Dr. Archdale's system was, on the suggestion of the President, reserved for another and separate occasion.]

Dr. T. A. Ross desired to associate himself with practically everything Prof. Robertson said; he had summed up the situation in a masterly way, and it had been a delight to hear him. And he

admired Dr. Potts's paper immensely; it was a magnificent summary in a short space. But he questioned whether Dr. Potts ought to say that nobody should practise psycho-analysis except those who had themselves been psycho-analysed. Neither Freud nor anyone else should be allowed to say that he alone had the method of psycho-analysis. By psycho-analysis an attempt was being made to detect trends and tendencies which were unconscious, the resultant of which was seen in conscious thought and conduct. All who pursued that line of investigation were doing psycho-analysis, and it was not necessary for them to be psycho-analysed first. What was wanted, more than anything else, was that somebody should be psycho-analysed who had never read a word on the subject, and by somebody who had not himself been psycho-analysed.

He agreed that every person who was a Freudian or a Jungist had a father complex, and that they never got rid of it. He, the speaker, was an irregular practitioner of psycho-analysis without having himself been psycho-analysed. Who analysed Freud, and where did he begin? This apostolic succession was a very short one, and everyone who called himself a Freudian was still a mirror of Freud's mind.

An enormous amount of Freudian material could be got by careful history-taking; dreams were not the only method. He used to think that psycho-analysts took histories very carefully, but last week he read a description of a careful analysis, and the analysis, apparently, began straight away: the patient got on to the couch and said what was in her mind, and in that way a large amount of material came out. He thought psycho-analysts were prone to say that by no other method could it be done. Yet when he spent 30 to 40 hours taking a history, the patient would say constantly, "Since I saw you yesterday I am reminded of something which I have never thought of since I was a child." History-taking was not an analysis; the analysis was made by the analyst, not by the patient; one ought to be frank about that.

He was sorry Dr. Crichton Miller had left the meeting, as he wanted to refer to what that gentleman said, namely, that psycho-analysis excluded physical treatment. That, of course, was nonsense. The patient said what was in his mind. If he said he had no sleep the previous night and he had a toothache, everyone would say, "Go to the dentist." Dr. Crichton Miller would like everyone to be administering endocrine glands, just as he would have liked everyone to be driving motor-cars before they were reliable. His own sympathy was with the man in the dog-cart, for he did get there, and no doubt that same man had now a Rolls-Royce.

He did not agree with Prof. Robertson about the interpretation of the closed room dream. He did not agree that what was thought of was the hopelessness of the asylum; what he believed Dr. Potts considered the patient was thinking of was the hopelessness of her mental state, that she felt she was being mentally transferred to a closed room, from which there was no escape. But that was not a sufficient reason for not proceeding with the analysis. Such a dream was a common thing; all sorts of people thought they were in a closed room and that there was no method of escape for them. It was one of the commonest types of dream of people who ultimately got well.

The President (Lt.-Col. J. R. Lord) said: I am sure all will agree that the papers and speeches we have heard on this subject have been very helpful and educative, and show that progress has been made and a broader outlook reached since last the Association debated it. Psycho-analysis, or, as some would call it, individual psychology, has for its basis dynamic conceptions, and is therefore something both living and active. Not only does it undergo those changes which in living tissue we call metabolism, but history shows that it has the power to grow and expand, its ramifications having spread and invaded a much wider realm of knowledge than abnormal psychology. As a purely psychic structure, it is unhampered by any material restrictions; hence its flexibility, pliancy and adaptability. But like every body of knowledge, it is fed by human experience, which means both disillusions and triumphs, enabling it to reach out to planes of greater precision and definition and to aspire to a scientific evaluation. Its practical applicability in the relief of human suffering shows that it can, in a measure, be regarded as a science. The crude theories in regard to psychoanalysis of former years are scarcely recognizable in modern individual psychology.

Before calling upon Dr. Potts to reply, I would like to state why I initiated this discussion. It was not at the dictates of the Press, nor to dissipate the cloud of ignorance in which the public are enveloped in this matter, but because I think it is the duty of this Association to review periodically subjects germane to the purposes for which it exists. Another reason is that I am anxious that the Association should remain an abiding place for all British psychiatrists, whatever school of abnormal psychology they profess, or the particular field of psychological medicine claiming their allegiance. It would be disastrous if it could be said that the Association favours this or that psychology, or limits itself to any narrow approach to the many practical problems it is out to solve.

The broad outlook must be retained at all costs, so that we can always meet and discuss the most contentious subject with kind-liness and courtesy, and afterwards separate with mutual respect and enlightenment, which makes for progress and a better understanding, both of each other and of the subjects which interest us.

Dr. Potts, replying to the papers and discussion, said that Dr. Ross and he were very good friends. Though they were in agreement generally on this subject, on one or two points they differed essentially. Dr. Ross said that every time, in an analysis, the inference was drawn by the analyst. That, he, Dr. Potts, denied absolutely. In a proper analysis the analysand himself saw the inference, and that was why the analyst should have training, so as to prevent him drawing an inference and forcing it on the patient.

He was interested in what Dr. Ross said about the dream. He was sorry Prof. Robertson should have thought he, the speaker, likened the patient's conception of an inescapable closed room to Morningside Hospital; his own conception of that institution was entirely different. He did not take the dream referred to as indicating that the case should not be treated, but that it was unsuitable for anything involving such a strain as psycho-analysis implied. The patient could only be treated in a mental hospital, where facilities existed for giving rest of a complete kind. If that patient had gone to Morningside, he thought there might have been a good chance of her ultimate recovery, and being fit, in the course of years, for analysis.

He agreed partly with what Dr. Ross said, that some of those who had been insufficiently analysed had a very marked father transference, either to Freud or to Jung; but he denied that that transference necessarily remained. Always when there had been a sufficient analysis it would disappear.

Dr. Archdale asked if the speaker had had any experience of psycho-analysis as a prophylaxis after psychosis. He, Dr. Potts, had had no experience of treating a patient who had been in a mental hospital, but he had had experience of patients who had gone through a condition which he would have diagnosed as a psychosis of short duration, and they had benefited by the treatment. Dr. Archdale also asked whether, when the case was relieved, the improvement was due to discovering a complex, or to suggestion. Dr. Potts's view was that it was not due to either. He thought it was due to the patient really understanding himself to his understanding what duties he was neglecting, how his handicaps had arisen, and, as Dr. William Brown so well explained, that what

was wrong with him was that his philosophy was inadequate for life; that he must accept not necessarily any system of philosophy, but different ideas from those he had been working with previously. He, the speaker, altogether repudiated the idea, if the analysis were done properly, that the cure was due to suggestion. One reason a special training was necessary was in order to avoid such suggestion to the patient.

A further question of Dr. Archdale was as to whether there was not a danger of making the patient worse. His reply was, Yes, there was a considerable risk of taking away the patient's self-esteem; and during the stage when the patient's difficulty was increased, the analyst must see that he had something to hold on to so as to keep him right. Therefore it was not desirable or suitable to do analysis unless there was sufficient time. If the patient could only come for a short time, the analyst would be careful not to produce such a state of affairs, because the patient might leave him when less able to cope with life than before.

Dr. Mapother was to some extent answered by Dr. Crichton Miller. He was surprised to hear Dr. Mapother say the subject had been discussed for twenty years. Jung's chief work, following Freud's, was not published until 1914, and Jung's most important contribution was his Psychological Types, which was published in Dr. Mapother seemed to have prejudged the original paper of Freud twenty years ago. Dr. Mapother said one must judge by results, and that he had not seen any. But how could he be expected to? A patient was seldom fit, at the time he went to the Maudsley Hospital, for this treatment. His, Dr. Potts's, feeling was that if a patient had been thoroughly treated, it would never be necessary for him to go under Dr. Mapother's care. that gentleman said he had not seen any results of the treatment, he would read an extract of a letter he had in his pocket. It was written by a man who was originally sent to the speaker by the police, and it was applicable to Dr. Mapother's objection, because this patient was treated for less than six weeks. He had been turned down as an absolutely hopeless case by a very well-known psychological practitioner: "It is now nearly three years since my ordination, and, thanks to you, they have been the happiest years of my life. As I once said before, I feel I could never thank you sufficiently for all you have done for me. It was entirely due to your treatment, kindness and sympathy," etc. "Since then I have led a perfectly normal life, with no return of my difficulties. I do not think it would be incorrect to say I have been successful in my work, and of help to others. I often think of the new psychology and its practitioners who, with its aid, turn so

many mental and moral wrecks into happy and useful citizens." That was the answer he would give to Dr. Mapother.

In reply to Dr. Wohlgemuth, he had to find an analyst who would accept him for treatment, and he, Dr. Potts, would say he was not a fit case for the treatment.

Dr. Hart had shown, in his Goulstonian Lectures, that the Freudian treatment was a definite scientific treatment. But it was not necessary to discuss whether Jung's was scientific, because Jung said it was not a science, and so long as Dr. Wohlgemuth was trying to settle whether the system was right or wrong by the answer to the question of whether or not it was a science, it was useless to discuss with that gentleman the Jung point of view.

He was glad Dr. Ross said what he did about the misunderstanding Dr. Crichton Miller must have been under. It was of the utmost importance that anyone who did psychological work should make the most thorough physical examination. He himself would not take any person for psychological treatment without a thorough physical examination having been made first. He remembered the case of a man who had been going blind for several years, and who had been seen by a number of leading neurologists and eye specialists in London. When he came to the speaker it struck him that his was not a psychological case, and as soon as he (Dr. Potts) examined the man's throat he saw appearances which made him think of syphilis. A consulting physician agreed, and salvarsan injections were given, which did him much good. That man had been allowed to drift on for three years, suffering from optic neuritis, simply because each time the Wassermann was done it was negative. In another case a man was told that his only chance was psychological treatment, and sent to the speaker after two or three consulting surgeons had seen him. suffering from posterior gonorrhœal urethritis, which was cured by appropriate physical treatment.

Syphilis and Mental Disease. (1) By H. Ferguson Watson, M.D., D.P.H., F.R.S.E., Deputy Commissioner, General Board of Control for Scotland.

## INTRODUCTION.

The rôle of syphilis in the causation of mental disease is of such importance that any investigation of the subject likely to elicit further data is obviously of great practical value, while available

<sup>(1)</sup> From the Manx Mental Hospital, Argyll and Bute Mental Hospital, and Bacteriology Department, University of Edinburgh.

statistics relating to syphilis, as an ætiological factor in mental conditions, show discrepancies which indicate the need for such investigation on the widest possible basis.

In recent years the Wassermann serum reaction and the examination of the cerebro-spinal fluid by chemical and cytological methods have contributed greatly, by supplementing clinical data and personal histories of cases, towards the accurate diagnosis of mental and neurological conditions of syphilitic origin, and have proved a valuable asset in the study of the part played by syphilitic infection generally in the pathology of the nervous system.

It is now generally accepted that the recognition of syphilis by purely clinical methods, even in the active stages of the disease, may present considerable diagnostic difficulty, and in its latent phase the actual existence of the infection can only be demonstrated by laboratory diagnostic methods. In addition, serum diagnosis has contributed greatly to establishing the syphilitic ætiology of pathological conditions whose causation had long been regarded as doubtful.

The syphilitic factor in such conditions as general paralysis and locomotor ataxia is, of course, now well recognized, and the Wassermann reaction has undoubtedly established the syphilitic origin of these conditions. In fact, in no other phase of syphilis, with the exception of the secondary stage, is a positive Wassermann reaction more constant than in general paralysis.

The value, therefore, of the Wassermann reaction in any systematic study of the relationship of syphilis to mental disease generally is undoubted.

For a number of years the author has been engaged in a study of the syphilitic factor in various pathological conditions, and more recently further attention has been specially directed to this ætiological agent in mental disease. With the aid of sero-diagnostic methods, it is reasonable to suppose that in mental hospital populations a larger proportion of latent cases may be detected than was at one time possible, and the mode of investigation proposed has been to carry out systematic serum tests in all cases in particular mental hospitals and correlate the results with personal histories and clinical data, with a view to obtaining in this way the maximum of relevant information.

The object of this paper is to record the results obtained from such an investigation carried out in (a) the Manx Mental Hospital, where 290 cases were studied, and (b) the Argyll and Bute Mental Hospital, where 388 cases were studied. These may be regarded as collectively representative of the general types of mental disease met with in public mental hospitals in this country, but it is intended

that, if possible, this communication should be followed by subsequent reports dealing with similar investigations in other selected mental hospitals.

## MENTAL HOSPITAL STATISTICS RELATING TO MENTAL DISEASE.

England.—In the Thirty-first Report of the Board of Control it is stated that in 1876 venereal disease was recorded as a cause of mental disease in 0.4% of the total admissions, being 0.6% for men and 0.2% for women. Among private male patients the percentage was 1.6, and for paupers it was only 0.3. In the Forty-fourth Report the yearly averages between 1879 and 1888 were for men 0.8% and for women 0.2%; among male private patients 1.8% and male paupers 0.6%. From 1888 to 1896 quinquennial averages are recorded, but after 1907 acquired and congenital syphilis are no longer quoted together.

TABLE I.

		Pri	vate.	Rate-aided.		
		Male.	Female.	Male.	Female	
1879-1888		1.8%	0.2%	0.6%	0.2%	
1889-1892		2.5%	0.2%	1.1%	0.4%	
1893-1897		4.2%	0.3%	1.8%	0.5%	
1898-1902		6.5%	0.3%	3.2%	0.8%	
1903-1906		<b>8</b> ⋅3%	0.5%	4.8%	1.0%	
1907		12.0%	0.5%	7.3%	1.2%	
1908-1912		11.8%	0.7%	9.0%	1.3%	

It will be observed that among the men the proportion is higher in the case of private than in pauper patients, while the converse obtains in women. With newer methods of investigation it was found that among 79,761 pauper patients 10.3% of the males and 1.6% of the females showed evidence of acquired syphilis. The incidence among males in some English mental hospitals is shown below:

TABLE II.

		Me	ntal hospit	als with				
(a) High percenta	(b) Low percentage:							
Portsmouth			28.3%	Salop .			1.1%	
Plymouth			22.5%	Denbigh			1.3%	
Croydon			20.4%	Derby Count	y .		2.0%	
London Cour	ıty		20.0%	Westmorland	and Cu	ımber-	•	
Newcastle	•		19.1%	land .			2.2%	
Cardiff .			13.2%	Suffolk .			3.1%	
Middlesex			12.0%	Leicester and	l Rutla	ind .	3.2%	

Scotland.—Mackenzie (1913) submitted the sera of 786 mental hospital cases to the Wassermann test. Two hundred and thirty-four had been diagnosed as suffering from general paralysis and 94% gave a positive result. Of 126 cases tested before examination or clinical diagnosis 62% were positive. In 64 cases of imbecility 25% were found positive, while of the remaining 362 who showed no clinical evidence of syphilis 8.8% were positive.

Gilmour (1913), at the Glasgow District Mental Hospital, Gartloch, examined 129 cases of admissions, and found 21% positive among the women and 35.8% among the men. Of 176 female cases, which did not include paralytics, 14.7% were positive; and, again excluding paralytics, among the men 18% of his 173 cases were positive. Mackenzie further reports that of 258 admissions to Glasgow District Mental Hospital, 54 patients reacted positively to the Wassermann test; while for the same period there was not admitted to the Mental Hospital for the counties of Argyll and Bute a single case of general paralysis in which infection did not appear to have been contracted outside of these counties.

## THE INCIDENCE OF SYPHILIS IN THE COMMUNITY GENERALLY.

In any consideration of the incidence of syphilis among patients suffering from mental disease, it is, of course, necessary to correlate the results obtained with the facts regarding the incidence of the infection in the general population.

Since the introduction of the test by Wassermann, Neisser and Bruck (1906), there are now abundant statistics available for comparing the findings of the different workers.

White (1914), in his evidence before the Royal Commission on Venereal Diseases, basing his estimate upon a consideration of all available statistics, came to the conclusion that in the United Kingdom there were annually about 114,000 fresh cases of syphilis. In 1919, D. Watson estimated that in Scotland alone there were 27,000 new cases of syphilis annually. The figure is probably much too high; on the other hand, those of the Registrar-General (for Scotland) are probably too low, because an examination of his figures for the decade 1912-1921 shows that 2,011 deaths occurred—that is, just over 200 a year were due to syphilis—and we find that about 75% of the deaths were children under one year of age, and only 47 adults died of syphilis. It seems fairly certain that certification was at fault when, out of a population of 4½ millions, only 47 adults died of syphilis, and yet more than three times as many children are certified as dying from that cause.

Perhaps a better estimate could be made from the death-rate for general paralysis and locomotor ataxia, because it is recognized

that of those who contract syphilis 2.5% to 3% develop general paralysis or locomotor ataxia.

Mattauschek and Pilcz (1921) traced the cases of 4,134 officers of the Austrian Army infected between 1880 and 1900. By 1912 some 4.8% had developed general paralysis and 2.7% developed tabes. One has, however, to bear in mind that these diseases are more prevalent among men than women. Vedder (1918) states that in Denmark about 2.5% of cases that contract syphilis eventually die of general paralysis. If, then, we take 3% as representing the figure for those who eventually die of general paralysis or tabes, we may conclude that in Scotland the number of cases of syphilis per annum is in the region of 9,000.

The Royal Commission on Venereal Diseases (1916) puts the percentage at not less than 10 of the whole population of large cities, there being little difference between Scotland and England. Ferguson Watson (1912) investigated 331 cases of children and found 10% were syphilitic, as evidenced by the Wassermann test. Elliot (1914) examined 130 cases of children at the City of Glasgow Fever Hospital and obtained 10% positive reactions; among the series only 4 showed clinical evidence of syphilis. Greig (1923) examined about 100 girls at an industrial school in Dundee and obtained positive results in 73%. All improved under antisyphilitic treatment. Laird (1923) examined 287 imbecile children in Baldovan Institution, Dundee, and, excluding all those who had manifested signs of syphilis, found 139 with a positive Wassermann reaction. Chislett (1911), in his examination of mentally defective children, obtained positive results in 45%. Ferguson Watson (1913) examined the sera of 105 defective children (a) under school age, (b) unfit for school by reason of their mental defect, and (c) markedly defective children seen while assisting Dr. Oswald, Glasgow Royal Hospital, with his investigation for the Royal Commission on the feeble-minded in 1907. Of the 105 cases examined 51 gave a positive Wassermann reaction-48.5%—and of that number 13.4% showed stigmata. Among the series were 14 Mongols, 3 of whom were positive. Stevens (1916) found 6 positive in his series of 18 Mongols. De Stefano (1920) found 34 positive out of 46 Mongols examined.

SEROLOGICAL METHODS USED IN THE PRESENT INVESTIGATION.

The sera were examined by the Wassermann test and also by the more recently introduced flocculation reaction. The methods were those used in the Bacteriology Department, University of Edinburgh.

Wassermann reaction: Antigen.—This was prepared from sheep's heart, which was minced, finely ground with sand and then extracted with 96% absolute

alcohol (20 grm. to 100 c.c. of alcohol); the extract was filtered and saturated with cholesterol.

Five antigens of different ages made by this method and one from ox heart were used in the tests. In each case the serum was tested with at least two different antigens, and in all doubtful cases six different antigens were used.

Technique.—The patient's serum was heated at 55° C. for half an hour. The hæmolytic system was ox's red blood-corpuscles (3 c.c. in 100 c.c. of 0.85% salt solution) sensitized with ox immune-body from the rabbit. Complement was obtained from a guinea-pig which had been killed 18 hours previously. The antigen for the test was made up in a 1:12 dilution with normal saline by slow admixture so as to form a turbid suspension. The M.H.D. of the complement for 0.5 c.c. of the sensitized blood suspension was estimated by preliminary test. Known negative and positive control sera were always included in each set of tests. The other necessary controls (antigen and serum) were also included. Readings were made after incubation and 12 hours later.

Flocculation test: Antigen.—This was the same as that used in the Wassermann test, and was made up in the form of a turbid suspension in saline (1 in 6).

Technique.—The patient's serum was inactivated at  $55^{\circ}$  C. for half an hour. Into small test-tubes  $(3 \times \frac{1}{2})$  in.) was placed o-4 c.c. of each of the following dilutions, I in 2, 4, 8, 16, 32 and 64, and one half volume of antigen suspension was added, i.e., o-2 c.c. Ferguson Watson (1925) has shown the importance of shaking. Thus the tubes were placed in racks and transferred to the carrier of an electric shaker for 5 minutes before being incubated at  $37^{\circ}$  C. for 4 hours. Readings were made at the end of that time and at 12, 24 to 36 hours. Positive cases showed flocculation which could be noted by the naked eye, while negative cases and controls showed no change.

#### RESULTS.

The number of cases examined was 678, and it was arranged that the laboratory tests should be completed before the history and clinical data were known to the author.

Of the 678 cases examined, 290 were from the Manx Mental Hospital and 388 from Argyll and Bute Mental Hospital. The comparative results in the case of the Manx Hospital are shown below:

Man	Но	spital.	 Number of cases examined.	Positive both reactions.	Negative both reactions.	*W.R. + F.T	W.R. – F.T. +.
Male Female	•	•	141 149	23 23	117 124	0	1 2
Total		•	290	46	241	o	3

TABLE III.

One male and one female case of feeblemindedness and one case of manic-depressive insanity were positive to the flocculation test and negative with the Wassermann reaction. The mental conditions of the remainder are classified in the table:

<sup>\*</sup> W.R. = Wassermann reaction. F.T. = Flocculation test.

TABLE IV.

			Positive reaction,			Neg	Total		
_	_			Female.	Total.	Male.	Female.	Total.	tested.
Acute confusional insanity		ty -	_	_	_	3		4	4
Dementia .			4	3	7	15	14	29	36
Dementia præcox		.	4	6	10	29	26	55	65
Epileptic insanity			ī	2	3	7	4	11	14
Feebleminded			6	7	13	32	38	70	83
" with	pilep	sv -	_				2	2	2
General paralysis	• •		1	_	1		- 1		1
Mania		.  -		1	1	4	- 1	4	5
Manic-depressive			3	2	5	ġ	16	25	30
Melancholia .			ī	_	1	á	4	-8	9
Paranoia .			3	2	5	12	18	30	35
Miscellaneous	•	-	_	_	-	2	1	3	3
Totals .		-	23	23	46	117	124	241	287

Of the 290 cases examined 141 were men and 149 were women. Twenty-three of each sex gave positive results in both tests, or 16.31% for male patients and 15.43% for females—an average of 15.87%. If one case of general paralysis is excluded the percentage falls to 15.60% or to an average of 15.51% for both sexes. history of syphilis or clinical evidence was present in 3.7%.

The table shows the result of the examination of the 388 cases in the Argyll and Bute Mental Hospital;

TABLE V.

Argyll and Bute Mental Hospital.				Number of cases examined.	Positive both reactions.	Negative both reactions.	*W.R.+ F.T		W.R †F.T.	
Male .	•			185	39	139	o	o	7	
Female	•	•		203	33	169	0	1	o	
Total	•	•	•	388	72	308	0	1	7	

One female case of melancholia gave a negative Wassermann reaction and a positive flocculation test. Seven male cases that

W.R. = Wassermann reaction. F.T. = Flocculation test.
 † In these 7 cases classified as "weakly positive" a trace only of flocculation was noted with the 1 in 2 and 1 in 4 dilution of serum. While known negative sera do not exhibit any change even in a 1 in 2 dilution, it is difficult to assess at present the diagnostic significance of the weak reactions observed in these 7 cases.

gave negative Wassermann results were weakly positive in the flocculation test. Four of these were cases of dementia præcox, 2 were feebleminded and I was a case of confusional insanity. Three of the cases had previously been resident in institutions, while 2 were ex-soldiers. The mental conditions of the remainder are shown in the following table:

TABLE	37 T
IABLE	VI.

		Pos	itive react	tion.	Neg	Total		
_	Male.	Female.	Total.	Male.	Female.	Total.	cases tested.	
Acute confusional insanity				y				_
Dementia .	•	. 7	2	9	22	44	66	75
Dementia præcox		. 15	6	21	45	41	86	107
Epileptic insanity			1	I	I	2	3	4
Feebleminded		. 5	2	7	26	14	40	47
" with epileps		y	-	_		3	3	3
General paralysis		. 2	I	3	_	_	_	3
Mania		. 1	2	3	2	4	6	9
Manic-depressive	•	. 2	2	4	14	II	25	29
Melancholia .		. 1	5	6	9	19	28	34
Paranoia		. 6	9	15	19	27	46	61
Miscellaneous	•	-	1	I	I	3	4	5
Totals .	•	. 39	33	72	139	169	308	380

185 men and 203 women were examined, and 39 of the former and 33 of the latter gave positive results in both tests, giving percentages of 21.08 and 16.25 respectively. If the cases of general paralysis are deducted then the men are 20.00% and the women 15.76%, or 17.88% average for both sexes (18.66% if paralytics are included). One male case of mania seems to be an incipient case of general paralysis. The percentage of cases which gave a history of syphilis or showed clinical evidence was 2.83.

#### Discussion.

All the figures available are not strictly comparable with mine. Those for England are not of recent date, while those for Scotland deal with admissions only, and therefore may include a higher proportion of recent infections, while my investigations deal principally with latent cases.

This investigation shows that, taking both sexes together for each hospital, the Argyll and Bute Mental Hospital would come sixth on the list when compared with those shown in Table II, and the Manx Hospital would also be placed sixth on the same list. The

former, however, with 18.66%, is comparable to Newcastle with 19.1%, and the latter with 15.87% stands relatively nearer Cardiff, which has 13.2%. Therefore, taking the English standard, both hospitals would be returned as with a high percentage.

In his investigation of 786 cases of admission, Mackenzie had 62% among 126 cases which were tested by laboratory methods before diagnosis and examination had been made, and 8.8% in his 362 cases which showed no clinical evidence of syphilis. In a further series of 258 cases 20.93% were positive, which is 2.3% higher than that found at Lochgilphead and 5.1% above the Douglas Hospital. Gilmour's figures were 28.40% for both sexes in his examination of 129 admissions. It is of special interest to note that in both Argyll and Bute and in the Manx Hospitals general paralysis was rarely seen in the past, but at the present time there are 2 men and 1 woman in the former hospital and 1 man in the latter—percentages in both instances which are very low indeed, and at present one might have such difficulty in finding a correct explanation that it is better not to seek one.

#### SUMMARY.

Manx Mental Hospital.—The number of cases examined was 290, of whom 46 gave positive results—23 men and 23 women; 241 were negative—117 men and 124 women; while I man and 2 women were positive with the flocculation test and negative with the Wassermann reaction. The male patients gave positive results in 16'31% and the female in 15'43%.

Argyll and Bute Mental Hospital.—The number of cases examined was 388—185 men and 203 women—and 39 of the former and 33 of the latter gave positive results. 139 men and 169 women gave negative results, while one woman was positive with the flocculation test and negative with the Wassermann reaction. 7 men gave a doubtful reaction with the flocculation test but were negative with the Wassermann reaction. The same result was obtained when these cases were tested one month later—altogether with six different antigens. The male patients gave positive results in 21.08% and the women in 16.25%.

### CONCLUSIONS.

- I. In this series of cases studied, the flocculation test, if not superior to the Wassermann reaction, has been proved to be in no way inferior, and its application is much simpler.
- 2. The investigation suggests that while syphilis in mental hospitals is more common among men than among women, there is not such a wide difference as was at one time supposed.

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- 3. By means of laboratory methods it can be demonstrated that the incidence of syphilitic infection is much greater than had been suspected. The percentage has been raised by 12.1 in the case of the Manx patients and by 15.0 for the Scottish hospital.
- 4. Better conclusions can be arrived at when a greater number of mental hospitals are available for comparison, but a true index can only result if the observations are made by the same author.

I am indebted to Dr. Skene, Superintendent of the Manx Mental Hospital, and Dr. Ross, Superintendent of Argyll and Bute Mental Hospital, for giving me the opportunity of carrying out this investigation in their hospitals, and I am especially indebted to Prof. Mackie for facilities in connection with the laboratory work.

References.—(1) De Stefano, Pediatria, 1920, xxvii, p. 992; ibid., 1921, xxix, p. 59.—(2) Elliot, Glasg. Med. Journ., 1914, lxxxi, p. 339.—(3) Board of Control (Eng. and Wales) Rpt., lxviii, pt. I, 1914, p. 25.—(4) Ferguson Watson, (a) Journ. Ment. Sci., 1913, lix, p. 640; (b) Journ. Path. and Bact., 1925, xxviii, p. 171; (c) "Recent Methods in the Diagnosis and Treatment of Syphilis," by Browning and Mackenzie, quoted pp. 224, 256, 261, 262, 263, 264, 265, 271, 278, 282, 283, and 288.—(5) Gilmour and Stewart, Fifteenth and Sixteenth Ann. Rpts. Glasg. Dist. Ment. Hosp., 1912 and 1913.—(6) Greig, Edin. Med. Journ., August, 1923.—(7) Laird, ibid., August, 1923.—(8) Mackenzie, Fourth Ann. Rpt. West. Asy. Res. Inst., 1913.—(9) Mattauschek and Pilcz, Syph. and Ven. Dis., by Marshall and Ffrench, quoted p. 157, 1921.—(10) Registrar-General (Scotland), Ann. Rpts., 1901—1921.—(11) Roy. Comm. Ven. Dis., Final Rpt., 1916.—(12) Stevens, Journ. Amer. Med. Assoc., 1916, Ixvi, p. 1373.—(13) Vedder, Syph. and Public Health, 1918.—(14) Wassermann, Neisser and Bruck, Deutsch. med. Wochenschr., 1906, p. 745.—(15) Watson, quoted by Dittmar, Trans. Incorp. Sanit. Assoc., 1919.—(16) White, Roy. Comm. Ven. Dis. (Append. First Rpt.), 1914.

Mendelism in Bacteriology.(1) By F. H. Stewart, M.A., D.Sc., M.D., D.P.M., Major I.M.S. (ret.), Assistant Medical Officer, Cheddleton Mental Hospital.

The studies which I wish to bring to your notice were begun with the object of finding some bacterial cause for manic-depressive insanity. This problem has, of course, engaged other laboratories. I would refer particularly to the work done in the Cardiff Laboratory, which has been described by Goodall in the Journal of this Association.

Our work in Cheddleton was given a particular direction by the first case examined, in which we found a very striking change in the intestinal flora—a change which developed and receded in exact parallelism with the maniacal exacerbations. During the attacks Bacillus coli communis disappeared from the fæces, and two microbes known as Bacterium coli mutabile and Bacillus paracoli appeared in

<sup>(1)</sup> A paper presented at the Annual Meeting held in London July 15, 1926.

its place. The same alteration was found in several other cases. But observations extending over the past four years have shown that the parallelism is not absolute. Some patients never exhibited the change at all, others exhibited it in one attack and not in another. It therefore became clear that we were not dealing with the cause of the disease, but with a concomitant or resultant phenomenon.

Nevertheless the facts were sufficiently striking to justify continued work along these lines, and we have therefore studied the life-history of the two abnormal forms, *Bacterium coli mutabile* and *Bacillus paracoli*, in some detail, hoping that increased knowledge would explain the mechanism of the change in the flora.

I do not propose in this paper to enter into details which are of interest only to professed bacteriologists, since a full account of the matter will, it is hoped, appear shortly in the *Journal of Hygiene*, but a few outstanding technical facts must be given to make clear the general conclusions at which we have arrived.

In the first place both Bacterium coli mutabile and Bacillus paracoli differ from Bacillus coli communis in that they lack the power of fermenting lactose. They belong to the group of non-lactose fermenting bacilli, which also includes the bacilli of dysentery, typhoid, paratyphoid, and food-poisoning, while Bacillus coli communis, on the other hand, belongs to the lactose fermenting group.

In the second place Bacterium coli mutabile, but not Bacillus paracoli, possesses to a remarkable degree the power of variation, and this power is exhibited by its formation of daughter races differing from the parent in their ability to ferment lactose. The daughter races have, in fact, become identical with Bacillus coli communis.

The credit of establishing these facts is due to the German bacteriologists Neisser and Massini, and their work has been extended by Arkwright, Penfold, Toeniessen, Baerthlein and György, who have been able to show that similar variation also occurs in many other species of bacteria. The variations which have been demonstrated concern not only the power of fermenting particular sugars, but also the habit of capsule-formation, the size, shape and motility of the individual bacilli, the appearance of the bacterial colonies, and, most important from the practical point of view, the virulence towards animals.

The opinion was also generally expressed that these variations in bacteria corresponded to those described in flowering plants by the Dutch botanist De Vries under the term "mutation." It was asserted that bacteria, which were not believed to exhibit sexual reproduction, could not vary on the Mendelian plan, which is characteristically evident in variation following union of gametes.

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It was also shown that the change in sugar reactions followed exposure to the sugar concerned, and was therefore a direct adaptation to environment.

Now in the work which we have been doing in Cheddleton we have been favoured to a high degree by abundance of material, and I think, therefore, that we may claim that we have extended the data, and made more distinct the rules which govern the phenomena.

We have shown (I) that Bacillus coli communis can be derived not only from Bacterium coli mutabile, but also from Bacillus paracoli, and that Bacterium coli mutabile can also be derived from Bacillus paracoli, the changes occurring in response to changes of environment. Thus an explanation is furnished of our initial problem, viz., the alteration of the intestinal flora in manic-depressive insanity; the non-lactose fermenters increasing in the bowel when the normal chemical conditions therein are disturbed, probably by an increase of protein content; and the lactose fermenters returning when conditions revert to normal, with an increase of assimilable sugar. This observation furnishes a guide to treatment by the avoidance of meat in the diet, and by a plentiful supply of fresh milk and of carbohydrates.

- (2) We have been able to show that in the colon and dysentery groups any given individual race may be modified almost at will by exposure to various sugars, in respect not only of sugar fermentation, but of capsulation and other characters.
- (3) As the result of these extended observations we have demonstrated that variation does not occur in one mode only, but in two. That one of these modes corresponds exactly with mutation of De Vries, and the other with Mendelian variation.

It will be well at this point to discuss the nature of these two processes. We will begin with the phenomena as found in higher plants and animals, and then pass to those occurring in bacteria, and the interpretation which we wish to place on the latter.

Both mutation and Mendelian variation are examples of discontinuity in the inheritance of characters, the parent giving rise to a descendant which differs from it radically in some respect. Mutation is such discontinuous variation occurring in the descendants of a pure non-hybrid form, it therefore occurs infrequently and irregularly, and it is not possible to predict the moment when it will occur, nor is it possible to predict what the nature of the change will be, since the stimulus determining the change, even if suspected, is so complex that its effect on the equally complex organism cannot be anticipated.

Mendelian variation, on the other hand, consists essentially in the separation of the two different elements (allelomorphs) composing

a hybrid; it occurs regularly in every generation, and it is possible to predict not only the nature of the descendants, but the numerical proportions in which they will appear: out of every four descendants, one will resemble one grandparent, one will resemble the other grandparent, and two will resemble the parent.

It should be noted that in multicellular plants and animals a variation to be hereditary must have taken origin in the germ-plasm, and therefore cannot result from an external stimulus, which affects only the soma of the parent.

In flowering plants instances of mutation are to be found in the origin of the cultivated varieties of the sweet pea, plants bearing new types of flower arising to all appearance spontaneously from old-established parents. Both old and new types breed true and are therefore pure.

The classical example of Mendelian variation following sexual reproduction occurs in the hybrid between the tall and dwarf varieties of edible pea. This hybrid is as tall as the pure tall since the tall factor is dominant to the dwarf. If two such hybrids are crossed the resulting generation consists of three types—pure tall, pure dwarf, and impure or hybrid tall.

Little attention has hitherto been paid to Mendelian variation in asexual cell division, but Bateson explains as a Mendelian phenomenon the occasional and rare growth of nectarines on peach trees. He considers that the peach tree is essentially a hybrid, in which the hoary character of the peach is dominant to the glabrous character of the nectarine, and that segregation of the peach and nectarine characters can take place in somatic cell division.

In our study of the intestinal bacteria we have found examples of variation which undoubtedly correspond to mutation in higher plants. A race which consistently breeds true under all ordinary circumstances may be assumed to be pure. Now if such a race is exposed to a definite external stimulus for a period prolonged over months, it may form a variant sub-race; for example a paracolon bacillus will not ferment lactose, nor will it give rise to descendants which do so in the ordinary cultures employed in bacteriology, but if it is grown in one lactose culture for several months it may give rise to a lactose fermenting sub-race, which will develop, and continue to grow, alongside the non-lactose fermenting parent race. This is an example of mutation, of the breaking-up of the pure race by a very prolonged, insistent external stimulus. The change is a direct adaptation to the external stimulus presented, and is heritable, because the organism is unicellular, and is not differentiated into somatoplasm and germ-plasm.

On the other hand, consider the case of the variable bacteria, of

which Bacterium coli mutabile is the type. This organism does not itself ferment lactose, but if it is grown on a medium containing this sugar, it will always, and within twenty-four or forty-eight hours, form two descendant sub-races, (I) a lactose fermenter which breeds true, and (2) a non-lactose fermenter like the parent, which again gives offspring of the two types. I would suggest that there is only one theory which will account for the regularity of this recurring phenomenon, namely, that the parent form is impure or hybrid. We are here dealing with Mendelian variation modified by the fact that the segregation of the two characters composing the hybrid is occasioned, not by gametic division, but by an external stimulus. This theory is supported by a further observation—that occasionally and somewhat rarely a third descendant sub-race appears, namely (3) a non-lactose fermenter which breeds true, and is therefore pure. This third sub-race completes the Mendelian scheme as it occurs after sexual reproduction.

If, then, we admit that the variable bacteria are hybrid or heterozygous, and if conjugation does not occur in bacteria, how can this hybrid arise? Our results point to the following explanation: that it arises by mutation of De Vries from a pure form, and that the mutation does not affect the entire constitution of the organism, but only one half of it; in Mendelian terminology only one member of a pair of allelomorphs is affected, so that the descendant is one half variant and one half parental—in other words hybrid or heterozygous.

It has been shown by previous workers, and we have been able fully to confirm the opinion, that these variations occur only in adaptation to the stimulus presented. A bacterial race which does not ferment a particular sugar will form a descendant sub-race which does so only if grown on the particular sugar concerned. This descendant sub-race, however, will retain the power acquired, even if grown for prolonged periods on media containing other sugars or no sugar at all. We have thus arrived at an hypothesis of the greatest importance to the theory of evolution, namely, that a race can adapt itself by variation directly to its environment, and that such an adaptation once achieved is rigorously inherited. hypothesis is supported by many observations concerning acquired virulence, of which we may instance the work of Toeniessen on Friedländer's bacillus, and of MacGowan and Chung Yik Wang on the organism of hæmorrhagic septicæmia. These observations show that virulence to the tissues of a host is acquired in the same manner as behaviour to a particular sugar.

Such an acquired character is inherited only by unicellular organisms; in higher forms it would, as far as our present knowledge

takes us, affect the soma only, and not the germ-plasm, and would therefore not be inherited. From the study of acquired immunity we may, however, gather evidence that variation of this nature occurs in the tissues of higher animals; that the defensive cells of the body may, in response to infection, undergo Mendelian variation by which they become virulent to the invading microbe; in fact they may behave as if they were independent unicellular organisms varying in asexual multiplication.

Variation in tissue-cells, although it must involve adaptation for the cell which varies, need not be favourable to the remainder of the body. It is clearly a necessary condition for the evolution of multicellular from unicellular beings, that the cells should acquire a factor inhibiting them from antisocial attacks upon their fellows. Inhibitory factors or chalones become exhausted in old age; hornless breeds of cattle, in which the development of horns is prevented by an inhibitory factor, "acquire as they grow old small horns"; old women, from exhaustion of ovarian internal secretion, become hirsute like men. This exhaustion predisposes to mutation by which the weakened factors are entirely lost; we have seen that in bacteria mutation occurs in senile cultures; " Professor Chapman states that he has often seen in Virginia very old peach trees bearing nectarines." The factors for the social inhibition of the tissue-cells are also weakened by advancing years; a local irritant acting over a prolonged period will cause the destruction of many cells; this cytolysis will provide a stimulus to the strongest cells which remain in the area irritated, a stimulus well adapted to cause mutation, by which a daughter cell race will arise lacking the social inhibitory factor, capable of invading its surroundings-in fact malignant or

In concluding I wish to express my indebtedness to Mr. W. F. Gifford, Senior Assistant in this Laboratory, for his co-operation during the past two years.

## Clinical Notes and Cases.

The Meinicke Micro-reaction for Syphilis in use in a Mental Hospital. By R. M. CLARK, M.B., Medical Superintendent, Whittingham Mental Hospital.

This is the Meinicke turbidity reaction (M.T.R.) for the serodiagnosis of syphilis improved and adapted to a microscope slide test; venous puncture is unnecessary, for sufficient serum is got from a drop of blood collected as for a Widal reaction.

A need has been felt for such a reaction, for micro-methods have been devised by Scheer and by Priestly (1) for the Sachs-Georgi reaction, by Kline and Young (2) and by Kahn himself for the Kahn reaction; Weidain, too, devised a micro-method for the Some of these methods have fallen into Wassermann reaction. disuse owing to the difficulty of rendering small quantities of serum inactive and for other reasons. The reliability of flocculation reactions for syphilis has been repeatedly testified to by numerous workers, and the report of the Health Committee of the League of Nations, which conducted an investigation into the comparative merits of various flocculation tests for the detection of syphilis (including Meinicke's) and the Wassermann reaction in 1922, at the Pasteur Institute, Paris, and again at Copenhagen in 1923, where the prinicipal laboratories in Europe were represented, reported favourably on these tests.

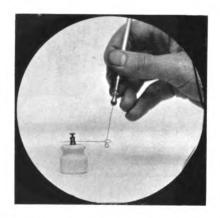
Dohnal (3), in 1923, devised a satisfactory method for Meinicke's turbidity reaction and reported very good results, and so also did Niederwieser (4).

In 1925 Meinicke (5) improved and simplified Dohnal's method, and after a comparison with the Wassermann reaction in 2,000 sera, satisfied himself that the methods were of equal value for the detection of syphilis. The practical value of modification has been proved also in the publications of Dohnal, Untersteiner, Rietschel, Loewy, Martin and Gilgers and Kötsing.

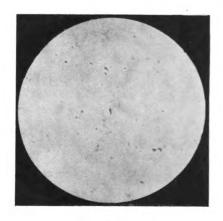
This reaction has attracted little attention in this country, although it is extensively used in European laboratories. No exhaustive comparative test has been attempted, and as practically nothing has been published about it in English and very little in American medical literature it will be of interest to record Meinicke's technique and instructions, and report experiences and observations on this reaction in the wards and laboratory of this Hospital.

The Meinicke antigen is an extract from horse heart muscle

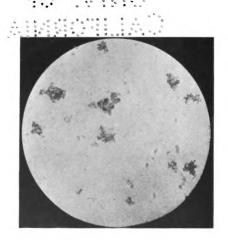
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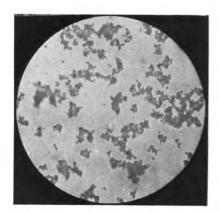
Photograph showing porcelain stand holding large eyelet with small eyelet in position for mixing.



1. Negative reaction.



2. Positive reaction † †.



3. Positive reaction † † †.

Photomicrographs: Ocular No. 8; objective 8 mm.

To illustrate paper by Dr. R. M. CLARK.

without cholesterin, but with balsam of Tolu added; the difficulty of inactivating small quantities of serum does not arise as inactivation is not required. Inaccurate and clumsy pipettes, with cleaning difficulties, have been replaced by two gauged platinum eyelets, cleaned by flaming; the larger, about 5 mm. in diameter, is made to hold exactly five loopfuls of the smaller, which is about 2 mm. in diameter. By the use of these eyelets a 1 in 6 mixture of serum in diluted extract is got. The platinum eyelets are easily made, but it will be found convenient to obtain the extract and eyelets from Dr. Meinicke's laboratory, Hagen, Westphalia. The extract is stable, and supplied in 100 c.c. bottles, sufficient to test 1000 sera.

Technique.—All glassware should be absolutely clean and free from grease. The test should be done in a warm, humid atmosphere—about 20° C. Serum: Prick the ball of the finger or lobe of the ear, and catch up the exuding drop of blood in a capillary tube 10 cm. long × 1 mm. inside diameter. Fill the capillary for two-thirds of its length only, so that the empty end can be sealed by flaming without heating the blood. If the capillary is to be sent away the other end is sealed with wax. Leave the capillary in a horizontal position in a cool place for a few hours until the serum separates. Centrifuge towards the sealed end, allowing the serum to collect in the middle of the capillary; break this part out after filing, avoiding blood-corpuscles, and it will contain the serum ready for use.

Dilution of extract.—Into one of two tubes 15 cm. + 1.5 cm. put 1 c.c. of Meinicke's extract for the micro-reaction for syphilis; into the other put I c.c. of a 5% saline solution to which pure sodium carbonate in the proportion of 1 in 10,000 has been added. Keep both tubes in a water-bath at 40° to 45° C. for five to ten minutes and then mix rapidly. Pour the diluted extract into a previously warmed porcelain crucible and cover it with a watch-glass. (The extract and soda-salt solution must be freshly prepared, for floccules form on the surface which interfere with the readings. In fact some antigen dilutions work only within ten minutes of mixing, for they become progressively opaque.) Raise the watch-glass and remove a drop of the diluted extract in the large platinum eyelet. This is then held in a level position by a small porcelain stand. With the small eyelet remove a drop of the serum to be examined and mix with the small eyelet in the lumen of the large one. After mixing well, remove one small eyeletful and make from it a hanging-drop preparation on a hollow slide in the usual way. Allow this to lie for an hour at room temperature, when it will be ready to be viewed through the microscope.

Examination of the hanging drop.—Using a binocular microscope with weak ocular and strong dry objective, commence by focusing the rim of the hanging drop, then pass to the centre, lowering the tube of the microscope slowly until the lower pole of the hanging drop comes into view. In this way the different layers of the hanging drop are recognized. In a negative reaction all the planes of the drop are optically empty, with the exception of infinitesimal dancing spots on the verge of visibility. Chylous and deteriorated sera and sera containing bloodcorpuscles deposit sediments in the uppermost plane and the lowest curve of the hanging drop; the intermediate planes are optically empty. In a positive reaction examination of the rim of the drop shows the field, not empty as in a negative reaction, but closely filled with clumps larger or smaller according to the degree of the reaction and always dispersed at regular intervals. Progressing towards the centre of the drop, at first moving the preparation without moving the micrometer screw, these clumps will appear more and more indistinct, but can be brought into focus by lowering the tube of the microscope. The reason for this is the relative weight of the clumps, which causes them to sink when remote from the rim of the drop and so become invisible in the upper plane. In a strong reaction with very decided sedimentation the upper plane of the drop may be optically empty even close to the rim. Genuine positive reactions are distinguished from pseudoreactions by their sedimentation. Characteristic of a positive reaction is the preliminary distribution of the clumps throughout the whole drop, then their sedimentation towards the lower pole of the drop during the reaction. Pseudoreactions occur in chylous sera, sera containing blood-corpuscles or deteriorated sera, and in all of which the contaminating non-specific particles are visible but are easily distinguishable from true positives by the use of the micrometer screw. As the field of vision descends to the lower plane of the preparation nearing the pole of the drop the differentiation becomes clear; the greasy particles in chylous sera and the larger shreds of contaminated specimens disappear entirely. When the tube has been so lowered as to bring the lowest surface of the curve of the hanging drop into the field of vision some few particles may appear afresh, generally isolated, roundish and sharp-edged, and conspicuous by their strong refraction; here, too, other sedimentations, such as blood-corpuscles, dust or bacteria, may be distinguished by their shape. For fuller details for the readings Dr. Meinicke's publications should be consulted.

In Dr. Meinicke's Institute the micro-reaction was originally set up for dark-ground examination as well, but now it is usually only set up in the hanging drop because the reading of this method affords the possibility of examining the different planes of the drop separately, and this gives greater security than the dark-field preparation, but if desired, the cover-glass can be carefully lifted from the concave slide on to a flat slide, where, firmly pressed down, it makes a good preparation for dark-field examination.

With dark-ground illumination, using weak ocular and strong dry objective, negative reactions show a grey visual field filled with numerous dense, upright, gaily dancing, small, clear, equal-sized dotlets. In positive reactions the visual field is black and only a few dancing dotlets are seen, the field having become empty and quiet.

The detection of syphilis in the patients of a mental hospital is a difficult matter, for venous puncture of every patient is rather a formidable task. In the absence of clinical findings, unless the serology of every patient is inquired into, syphilis will be missed. Our practice is to send away all bloods for the Wassermann reaction, and we often parallel the results with the Sachs-Georgi, M.T.R. or Kahn reactions. When venous puncture is done sufficient blood is taken for all tests at one puncture. The Wassermann results arrive by post a few days after we have recorded the precipitation tests. In contrast with these tube-precipitation tests we have found the Meinicke micro-reaction of real practical value in detecting syphilis, one of its great advantages being that venous puncture is unnecessary. For several months we have carried out this test on admissions, and bloods giving positive or indefinite results have been verified by the Wassermann reaction. In this way much economy in time and labour is effected, and few, if any, cases of syphilis are missed. The collection of blood for the Meinicke micro-reaction may safely be left to a trained nurse; the technique is not more difficult than that for a Widal test, little apparatus is required, and it can easily be carried out in a small laboratory; the readings are easier, and there are fewer indefinites than with tube-precipitation tests-a glance down the microscope is usually sufficient to make a diagnosis. The platinum eyelets are a great advance on fine pipettes for getting the I in 6 mixture of serum and diluted extract, and they so simplify the

technique that as many as ten reactions can be carried out with ease in fifteen minutes. The method of mixing within the large eyelet devised by Dr. Grosse (6) avoids the sources of error caused by working with greasy glass, and it is surprising how the drops in the eyelets do not crack and split open. Care should be taken that the vaseline ring for the cover-glass of the hanging drop is complete and so hermetically seals the cell, otherwise evaporation and false clumping may take place; to obtain this we have conveyed the ring of vaseline by the wire-ring method described by Kline and Young (2).

Examination by dark-ground illumination has given reliable results, and we would not wish to dispense with it.

## Results and Comparisons.

- (I) The blood-sera of 138 patients were tested by both the Meinicke micro-reaction and the Wassermann reaction. group were 31 consecutive admissions, 57 psychotic patients from the acute, chronic and infirmary wards of this hospital, including a few suffering from conditions in which occasionally unspecific reactions are recorded, e.g., pregnancy, tuberculosis and gonorrhœa, also lethargic encephalitis and cancer. The group also included 50 cases of known syphilis, including general paresis (untreated and treated by malaria, arsenic and tryparsamid), tabes, meningo-vascular and tertiary somatic syphilis. There was agreement between the two reactions in 127 sera, 49 positive and 78 negative, disagreement in II. Of the disagreements, 6 occurred in general paralytics, who had been treated by malaria, all of whom had given positive Wassermann reactions previous to treatment; of these (and referring to the different patients by registered numbers). 381 and 386 gave a negative Meinicke and 2 and 218 an indefinite Meinicke against a positive Wassermann reaction in all four: 202 gave a negative Wassermann reaction and 177 a doubtful Wassermann reaction, but with Meinicke both gave positive reactions. Of the others, 263 with no signs of syphilis and with negative Wassermann reaction in both blood and cerebro-spinal fluid gave a ++ Meinicke. Two others, 84 and 361, gave Meinicke + and Wassermann reaction negative, whilst 80 gave a doubtful Meinicke and a negative Wassermann reaction.
- (2) The Meinicke micro-reaction was carried out on 308 patients whose case-records showed that syphilis was neither detected nor suspected—syphilis having been eliminated from this group by the usual methods adopted here, viz., complete clinical examination with inquiry into personal and family histories, and a blood

Wassermann test or cerebro-spinal fluid test on about 35%. The Meinicke micro-reaction was negative in 304, positive in 4; blood from the latter was then sent for Wassermann test, and all four gave positive Wassermann reactions, and later clinical signs of syphilis were detected. From this investigation it would appear that false positives are not numerous with the Meinicke reaction.

#### Conclusion.

The Meinicke micro-reaction is a valuable addition to laboratory methods for the sero-diagnosis of syphilis. It is simple, ready and accurate, and will be found especially useful in the insane, in children, in obese persons, or those with small veins, where only small quantities of serum are available, and in emergencies when a diagnosis cannot be delayed. Large numbers can be dealt with in a short time. It is an excellent test for use in a mental hospital and for the routine examination of admissions.

Dr. Meinicke writes recently: "According to observations made in my laboratories, the micro-reaction is not only more reliable in doubtful cases than the M.T.R., but also than the Wassermann reaction and all the other syphilis reactions, because it is the only method by which simultaneously with the reaction proper all the integral properties of the sera (deterioration, chylous clouding, contamination by bacteria, or blood-corpuscles and their shadows, etc.) may be observed under the microscope." The illustrations show the method of mixing, also positive and negative reactions as seen through the microscope. I am indebted to Dr. Meinicke for advice and assistance, and to Mr. Fann, who has carried out most of the laboratory work and taken the photographs.

#### REFERENCES.

(1) Priestly, Lancet, June 23, 1923.—(2) Kline and Young, Journ. Amer. Med. Assoc., March 27, 1926.—(3) Dohnal, Derm. Wochenschr., 1923, No. 34.—(4) Niederwieser, Wien. klin. Wochenschr., 1924, No. 39.—(5) Meinicke, Med. Klin., 1925, No. 4, and also Derm. Wochenschr., 1925, No. 26.—(6) Grosse, Derm. Wochenschr., 1926, No. 19.

# Medico-Legal Notes.

# REX v. JOSEPH EDWARD FLAVELL.

This case was tried at Worcester Assizes on June 9, before Mr. Justice Avory. The prisoner was a crane driver, 24 years of age. He was accused of having murdered his half-brother, at Dudley, during the night of March 5-6, by smashing in his head with an axe. The prisoner's father had died when he (prisoner) was about 6 years of age. The mother had remarried about two years later. and the murdered lad was the only child of this second marriage. The family lived at a public-house owned by the mother. prisoner and the murdered lad slept in one bedroom. On the evening of March 5 the prisoner came home at a late hour, and was rebuked by his mother, who told him that he must keep earlier hours or find another home. Nothing unusual was heard during the night. Next morning the prisoner came downstairs, and asked his mother to give him some money, saying that he was going away, and that if he did not have money he "would give himself up." No questions appear to have been asked, but no money was given, and the prisoner left the house. Later, the body of the murdered lad was found in bed. The prisoner gave himself up, that same evening, to a police constable in Birmingham, to whom he used the words, "I had cause to do it." The facts of the case were not disputed, and the defence raised was that of insanity.

It was clear, from the evidence, that the prisoner and his stepfather were not on good terms, and that the prisoner was jealous of the murdered lad. The mental conflict which might be expected in such a case was, no doubt, in existence. It was contended, by counsel for the defence, not that the prisoner "did not know the nature and quality of his act," but that his emotional reaction was abnormal, and that, consequently, he did not know that the said act was wrong. Counsel attempted the elaboration of this point. Evidence was adduced to the effect that, as a child, the prisoner had been unduly mischievous, and cruel to animals. For these reasons he had been taken, when about 8 years of age, to see the late Dr. J. W. Russell, of Birmingham. It was also suggested that the prisoner was not of the average standard of intelligence; various estimates were given by lay witnesses, none of whom, however, placed his intelligence lower than that of an ordinary boy of 14 years of age. Evidence was given of a number of cases of insanity in the prisoner's family. Dr. Walter Ross Jordan, of Birmingham, had examined the prisoner, since the crime, upon

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several occasions. Dr. Jordan regarded the prisoner as lacking in the finer sentiments, and considered that he had not the normal appreciation of the act which he had committed. Dr. V. G. Maitland, of Dudley, had known the prisoner for some years, had examined him since the crime, and did not think that he knew his act was wrong.

Rebutting evidence was called by the prosecution. Dr. M. Hamblin Smith, medical officer of Birmingham Prison, had kept the prisoner under observation for three months. He considered that the prisoner's intelligence was fairly good, and did not regard him as coming within the legal definition of insanity, although his emotional reactions were not normal. Dr. W. R. K. Watson, of Brixton Prison, had examined the prisoner and regarded him as sane, but as somewhat lacking in intelligence, although not certifiable as a mental defective. Dr. A. C. Pearson, of Wandsworth Prison, had also examined the prisoner and gave similar evidence.

The judge summed up in terms of the McNaughton rules, and said that even if the prisoner's intelligence were that of a boy of 14 years of age, he would still be responsible for his actions. The jury found the prisoner guilty, and he was sentenced to death.

The case was taken to the Court of Criminal Appeal. It was argued, on behalf of the prisoner, that recent events, including the report of the Atkin Committee, indicated that the McNaughton criteria must now be regarded as insufficient. It was pleaded that the case was not one for punishment, but for permanent care. The Court, however, dismissed the appeal, stating that the law must still be administered in accordance with the McNaughton rules.

The death sentence was not carried out. The Home Secretary advised His Majesty the King to exercise his prerogative of mercy, and the prisoner's death sentence was commuted.

## Occasional Notes.

Philippe Pinel (1745-1826).

On October 25 of this year falls the centenary of the death of Philippe Pinel, and we feel that we cannot let the occasion pass without paying a tribute to the fine character and great achievements of this illustrious physician and philosopher whose name is written indelibly in the annals of psychological medicine.

His glorious work in Paris, which emancipated the mentally afflicted from probably the most appalling conditions to which

human beings had ever been subjected—conditions perhaps the most brutal and degrading ever known, even worse than the lot of the Spanish galley-slave—has made itself felt throughout the civilized world, and every modern mental hospital or psychiatric institution is a temple erected to his honour. Well might Marx in his Akesios (1844) eulogize him in the following words:

"He who walks in an odoriferous flower-garden, which has formerly been a pestilential swamp, will best be able to appreciate what you effected in madhouses. Formerly an atmosphere almost stifling, damp rooms, the clank of chains, the cries of those under the lash, the hoarse growl of the rough attendants, the desperate frenzy of the ill-used patients; these succeeded by clean apartments, the greatest humanity in personal attentions, and an atmosphere of peace and confidence throughout the whole establishment.

"As you were to the sick a guardian angel, so to learners you were an intelligent teacher, and to your contemporary medical brethren a model of spotless morality. "Such a man lived long enough even had his life been short; his labours are not to be reckoned by hours; the heroic death of him who has convinced others, even if it comes early, is the noblest that a man can wish for."

Esquirol, upon whom Pinel's mantle fell, says of him:

"He had the genius of a great man and the virtues of a good man. He illuminated his century by his writings, by his teaching and by his moral qualities" (Memories, tome I, p. 231).

Long ages ago man defied Nature and took his fate in his own hands; yet, despite his attempts to mould his environment to his own purposes, from time to time great movements occur in which his instrumentality is unwitting and in whose grasp he is more or less helpless. The progress of mankind has mainly been the history of such movements, and their effects have been far more profound than the schemes he has of himself deliberately initiated. The renaissance of psychiatry was one of these movements, and, like most of them, arose simultaneously in widely scattered centres. The reason why, how and where they originate is often difficult, even impossible, to state. There is no doubt, however, in this case that Pinel played a dominant part, as subsequent history shows.

Without pausing now to discuss the nature of the particular teleological factor involved, it may be stated that the instruments of these movements have been selected from all sorts and conditions of men. In not a few instances some of those whose instrumentality has had the most profound effect have been of humble, even insignificant origin. Again, the factor, incident or circumstance which has set in motion activities which may have ultimately revolutionized human character, conduct and aspirations have been trivial in comparison with the momentous outcome.

How true is all this of Pinel. The son of a poor and ever-struggling country doctor, as a student at Toulouse he had to teach others in

order to supply his own immediate wants. When, in 1777, having taken his doctorate of medicine on December 22, 1773, at the age of 29 years, he decided to seek his fortunes in Paris, he was so poor that he had to make the journey on foot.

Again, we have it on good authority that it was the tearing to pieces by wolves of a dear friend, who, when suffering from mania, escaped from his home to a neighbouring forest, that turned Pinel's mind definitely towards psychiatry.

Pinel felt from early life that he was destined to do great things, and intuitively he saw the necessity for developing his mind and equipping himself with knowledge of a wide kind. He found faithful friends and both help and consolation in the writings of Hippocrates, Æschylus, Sophocles, Pindar, Plato, Virgil, Horace, Plutarch and Montaigne. He dipped deeply into mathematics, mechanics, geometry, chemistry, botany, zoology, besides his medical and surgical studies. He lost no opportunity of becoming acquainted with the social problems of his day and he learned human nature at its worst and at its best.

During this period of maturation he was unknown except to a small circle of personal friends of great distinction, and for fourteen years abided his time, apparently satisfied with the present and careless regarding the future.

Yet this sensitive, reserved and retiring man, who was tender-hearted, of broad sympathies, who loved beauty, poetry and all sublimity, and was essentially a dreamer and student, had become possessed of such moral courage and indomitable will, that when the time and opportunity came, not only carried through successfully his historic work for the insane, but by his writings, his teaching and his example renewed Hippocratean principles and methods which had for years lain in the dust of the practice of medicine in France, and for which all Europe indeed became his debtor.

The story of his work at the Bicêtre, at the Hôtel Dieu and at Salpetrière has become an epic, and is so well known that it calls for but little comment here. It struck the popular imagination, and the fame of Pinel and the spirit of his teachings spread far and wide.

Though dramatic in its setting and in the intensity of its effects, it was not undertaken lightly or without due care, but based upon the experience gained during several years of the moral and humane treatment of acute mental illnesses at a new asylum, the Maison de Santé Belhomme, which opened its doors about 1785 and in which Pinel placed the first patient admitted.

His influence, however, in the wider sphere of general medicine has not been so well remembered. The conflagration into which France and all Europe had been thrown in Pinel's times had dealt hardly with medical education, and out of the remains of the shattered schools three were established in France on ambitious lines. In 1794 Pinel was one of those chosen to organize the École de Paris, at which he became Professor of Hygiene and Pathology. He was a dominant power in this school, which for a time was known as the École de Pinel. He applied the methods of observation, analysis and induction to clinical medicine, and as Pariset in his éloge delivered to the members of the Académie Royale de Médicine puts it—

"Pinel obtained the singular honour of reforming the practice of his contemporaries; he learned to see, to study, to separate phenomena, to bring them together, to compare them, to measure them in some sort, and, finally, to form his conclusions; but to form these conclusions by cautious inductions, and thereon to regulate the choice and application of medicaments—medicaments which he always preferred should be simple, few, and of well-known effect. In short, by his lessons and his example, he did what Cabanis wished to do—he restored the medicine of observation, the only one which Hippocrates, in his divine works, has bequeathed to posterity."

Pinel's European reputation received its final crown when he wrote his Nosographie Philosophique, ou la Méthode de l'Analyse appliquée à la Médecine, first published in 1798. As edition succeeded edition, each improved upon, its circulation extended throughout Europe, and for twenty years and more was the acknowledged standard work for students and practitioners. He was elected a member of the Institute in 1803, was Consulting Physician to the Emperor Napoleon in 1803 and a member of the Legion of Honour.

No pen has ever yet adequately described the homage rendered to Pinel at his funeral when he was laid to rest in the cemetery of Père-la-Chaise. The immense concourse of people that assembled included the most eminent and the very poor and lowly—even paralytics crawled along to the place of interment. Pariset says: "Men of science, in their discourses, rendered homage to his genius; the poor, by their lamentations, rendered homage to his virtues." And now after a century his memory is yet green, his fame undimmed, and the spirit that animated him still lives on embodied in modern medicine.

J. R. LORD.

The Report of the Royal Commission on Lunacy and Mental Disorder.

The lively hope expressed by our President at the Association's Commemoration Dinner on July 15 that the Report of the Royal Commission would recommend the abolition of the many anomalies

and the relaxation of the legal restrictions which had for nearly a century handicapped the progress of psychiatry in England and Wales, has in a large measure been realized now that the Report is available to anyone who chooses to apply at H.M. Stationery Office—price 3s. 6d. At the same function the Rt. Hon. Hugh Macmillan, K.C., in a witty and cheerful speech, struck a vein of hopefulness respecting the future of psychiatry, as did also the speech of Sir Arthur Robinson.

For some months there had been growing a feeling that in regard to the Royal Commission's findings common sense and a broad vision would triumph, and that the traditional supremacy of the legal and detention viewpoint would receive a set-back, and mental therapeutics would be given more freedom of action, especially in the care and treatment of mental disorders in their early stages.

It was obvious from the first that the Commission had determined to do its work thoroughly, for the procedure adopted not only included oral and written evidence of a wide character, but also visits to mental institutions and interviews there with patients as well as staff. It soon also became apparent to those who followed the proceedings that there were on the Commission fair, open-minded and fearless servants of the public, and that its most valuable asset was a remarkably astute and clear-thinking Scotch lawyer at its head. Mr. Macmillan confesses that he came to the task entrusted to him without any particular knowledge of lunacy. That of course, in the circumstances, was a recommendation rather than otherwise, but his chief advantage was the absence of that iron-bound legal conception of lunacy, which is the bane of the English lawyer.

It was felt, too, that the more thoroughly the problems facing the Commission were investigated, the more its findings would be to the advantage of psychiatry and the more generous the recognition of the good work already being done in every field of psychological medicine. There was no fear that an honest investigation would substantiate those wild and terrible accusations levelled at the personnel of the mental hospitals by a few disgruntled ex-patients, and organized and voiced by their possibly willing dupes with a fervour which, without its malignancy, might have been better spent in helping to secure those reforms initiated and for long advocated by our Association, and which, in a large measure, have been endorsed by the Commission.

Few of us, however, were optimistic enough to expect the Commission to recommend a complete tergiversation on this subject as exemplified in the following abstracts from its Report:

- "The modern conception calls for the eradication of old-established prejudices and a complete revision of the attitude of society in the matter of its duty to the mentally afflicted." (p. 16.)
- "The keynote of the past has been detention; the keynote of the future should be prevention and treatment." (p. 17.)
- "Contrary to the accepted canons of preventive medicine, the mental patient is not admissible to most of the institutions provided for his treatment until his disease has progressed so far that he has become a certifiable lunatic. Then and then only is he eligible for treatment. It is, perhaps, not remarkable in these circumstances that the percentage of recoveries in public mental hospitals is low. In our view the position should be precisely reversed. Certification should be the last resort in treatment, not the pre-requisite of treatment." (pp. 18-19.)
- "If the true conception of a mental patient is that he is suffering from an illness, we cannot help feeling that those who desire the further elaboration of legal machinery are apt to lose sight of the common sense of the matter." (p. 20.)
- "The problem of insanity is essentially a public health problem to be dealt with on modern public health lines. So only will the atmosphere of suspicion and aversion with which the subject is invested be dissipated." (p. 22.)

These sentences, taken from Chapter II, which deals with "General Considerations of Policy," are indicative of the spirit which pervades the Report.

The immense area covered by this historic document—for historic it is, and, let us hope, to be followed by correlated historic events at an early date—precludes anything like a detailed criticism at this moment; so all we propose to do now is to make some general observations on the nature of its contents and their practical application, and also as to how best its consideration can be approached by the Association.

In our evaluation of the report of a Royal Commission, it is necessary to bear in mind that such a body is only entitled to arrive at conclusions which are strictly limited to and based upon the evidence, whether documentary or oral, it has of itself gathered or has been submitted. There may be many other facts germane to the inquiry within the knowledge of the members of the Commission individually or collectively, but unless such facts are brought forward as evidence, they cannot be taken into account in coming to conclusions, and the personal leanings and feelings of

members, as in a Court of Justice, cannot be allowed to sway their judgment.

It follows, then, that this Report cannot be really appraised until the minutes of the evidence upon which it is based are examined. Another body of persons, on studying the evidence, might come to quite different conclusions. The minutes of evidence show what body of opinion has been the main inspiration of the Report, also whether the conclusions arrived at by the Commission are a fair interpretation of the facts as revealed in the evidence. We have little doubt that the Report will, in the main, come out well in this ordeal, though we regret the Commission did not ask for the considered views of the Association before commenting on the alleged undue severity of the Association's nursing examination. As it is, the opinions to which prominence is given are based upon misapprehensions, only too common, and they are now likely to be perpetuated and not cleared up, as was very desirable.

Many will, no doubt, be disposed to agree that there is a place in the modern mental hospital for the assistance of staff not highly trained in mental nursing, so long as their employment is limited to the care of certain classes of patients we cannot pause to describe here, and always, like probationer nurses, under the direct supervision of fully trained mental nurses. This proposal, however, is quite irrelevant to the matter of the training and examination of mental nurses.

It should be remembered that although immense strides have been taken in regard to the treatment of recent, acute and physically sick cases, the greatest revolution of all, and that which has done most to turn the madhouse into a mental hospital, has been in regard to the care and treatment of chronic and especially the chronic turbulent patients. For this the credit is entirely due to the advent of the highly trained mental nurse, and could not have been achieved otherwise. The Association will be unanimous that any dilution of the trained personnel of a mental hospital is a matter which calls for most serious consideration before adoption.

The Commission's observations otherwise on the technical qualifications of the nursing staff employed in mental hospitals are very sound and distinctly favourable to the Association's views. They may assist materially in the solution of the question still outstanding of the recognition by the State of the Association's nursing certificate for the purposes of State registration.

The duty now of the Association is to decide what lines to take to combat any recommendations in the Report with which they are not in agreement, or which, in the opinion of the Association, do not go far enough. These lines of action are two—either to show that such a recommendation is against the great volume of evidence on the point, or that the evidence adduced in support is incomplete and requires supplementing before a sound conclusion can be attained.

We must also bear in mind that it is the worth, *i.e.* the utility and practicability of a recommendation which are the important points. As to whom should be given credit for its inspiration is a secondary matter. Our contemporary, the *Lancet*, commenting on the Report, says:

"The Report is a bold though temperate acknowledgment that the existing lunacy administration has not kept pace with increasing sociological experience, and especially has not evolved in proportion to a vast modern growth of medical knowledge, both general and in the field of medical psychology. Yet some of the suggested methods of reform have already been adopted by enlightened mental hospitals. Many others would now be in working had it not been for financial difficulties which have become more acute in recent years. Most of them have been recommended for long by the Medico-Psychological Association. It will be no small relief and satisfaction to the mental hospital service if measures which have so far been hardly achieved by constant pressure and scrupulous economy now become statutory duties. The early treatment of mental disease without certification has already made a beginning in various places in spite of legal hindrance, and the recommendations of the Commission as a whole will have the solid support of the medical profession. But early treatment and avoidance of detention under certificate can only be achieved when an intimate knowledge of the first symptoms of mental disorder becomes the common possession of the whole medical profession."

There is a good deal of truth in this, and the kindly reference to the activities of our Association and its long advocacy of many of the Recommendations made by the Commission is gratifying. But however true and proper these comments may be as coming from a much esteemed contemporary, the Association will be well contented if there follows from the Report a forward move, which, if not calculated to carry out entirely the Association's ideals, yet will be in this direction, for it can be at once stated that the Recommendations of the Commission fall short of all we wish to see come about. These Recommendations contain both great and small mercies, chiefly the former, for which we are duly thankful, but at the best they can only be considered as the cities and main roads of the psychiatric plan. All the smaller places, the secondary roads, the hills and dales and other details yet require to be filled in.

On the whole we think the Commission has been wise in not giving prominence to the views of any of the expert bodies which tendered evidence. It must be remembered that one of the factors in the appointment of the Royal Commission was the unscrupulous attack organized by the National Society for Lunacy Reform, an attack which respected no body of persons who had to do with the care and treatment of the mentally afflicted, save perhaps the Mental

After-Care Association, and anything which, on the part of the Commission, could be misconstrued into undue leaning towards the views of any of those who were the subjects of this attack would have prejudiced its Report, which, as it happens, is very destructive to the pretensions and allegations of the Society. The criticism has, in fact, been made by such of the Press as gave prominence to the sensational allegations of this Society and its supporters that the Report is a "whitewashing" one, and such a criticism would have been strengthened by a further one of undue pliancy in the hands of those operating that figment of diseased imagination called the "system." We think that the acknowledgment of the assistance the Commission received is both courteous and ample, and is conveyed in the following words:

"In framing these proposals we have been materially assisted by the constructive suggestions tendered to us by the Departments, the British Medical Association and the Royal Medico-Psychological Association. We do not think it necessary to analyse those suggestions in detail. The proposals of the Board of Control are explained in Sir Frederick Willis's evidence (Q. 21, 260 et seq.), and the recommendations of the British Medical Association and the Royal Medico-Psychological Association are reproduced in Appendices XXII and XXIV respectively. We have not adopted any one of these schemes in its entirety; but we believe that our recommendations, though differing in certain respects, are based upon principles which will command general acceptance." (p. 50.)

Now as to a description of the Report and the ground covered. It is a document of 177 pages 8vo and is signed by all the Commissioners. There are three short appendices which give a list of witnesses, of the memoranda furnished and an analysis of the principal statutory provisions respectively. The report proper is divided into three parts. Part I deals with "Procedure," Part II with "The Law and Administrative Machinery, etc.," and Part III comprises a "Summary of Conclusions and Recommendations." Part II has seven chapters, devoted, in the following order, to introductory (historical note (1); outline of the present system), general considerations of policy, certification, detention, care, private institutions, local and central authorities.

The principal aspects of the problem are, for the most part, dealt with in the following manner: A statement of the existing law and practice is first given, which, in the next section, is subjected to a detailed criticism, following which come the proposals of the Commission in this particular relation. These statements of the

We notice that the date of 17 Geo. II is given as 1743. It should be 1744.

existing law and practice are particularly explicit and lucid, and enhance the value of the Report.(1)

Before we comment on some of the more important recommendations of the Commission let us look for a moment at one or two fundamental points raised in the Report.

No one will doubt the soundness of the view that the intervention of the law in dealing with cases of mental illness should extend no further than is necessary to ensure—

- (1) "That no mental patient's liberty is infringed longer or to a greater extent than his symptoms necessitate in his own or the public interest."
- (2) "That advantage is not taken of his disabilities to neglect or ill-treat him; and
- (3) "That he receives proper treatment for his ailment." (p. 21.)

We are pleased also to note that the terms recommended by the British Medical Association and approved of by our Association will take the place of "lunatic" and "lunacy," and the terms "mental hospital" and "rate-aided" (2) will be substituted for "asylum" and "pauper" respectively.

We may envisage, then, the time when mental patients will be those suffering from (1) mental defect, (2) mental disorder—(a) those of unsound mind who may properly be taken charge of and detained for care and treatment, i.e., certifiable cases and incapable of managing themselves, (b) those with mental ailments, i.e., uncertifiable and capable of managing themselves and their property and affairs, and some capable of managing themselves but not the latter. We judge that voluntary patients may belong to any of these categories so long as they have true volition, i.e., they may be certifiable or uncertifiable. The present legal position in regard to the in-patient treatment of cases of certifiable mental disorder. whether on a voluntary basis or not, remains radically the same, i.e., illegal excepting that such cases can, on complying with the law, be treated, whether for profit or not, in any mental institution recognized by the law or in single care. In-patient treatment of uncertifiable cases of mental disorder (i.e., mental ailments) and out-patient treatment of cases of mental disorder, both uncertifiable and certifiable, remains legal. Thus the legal basis of

¹ There are similar sections and paragraphs here and there throughout the Report and historical references in addition to the historical note in the Introduction. If all these were extracted, collected and edited as one document, they would constitute a brief but comprehensive and highly intelligible résumé of lunacy law and practice. Something of this sort—inexpensive and authoritative—on this subject is much needed for the enlightenment of the public generally, and we commend our suggestion to the consideration of H.M. Stationery Office.

² Already adopted by the Board of Control (England and Wales).

our lunacy system has not been tampered with by the Commission, but rather strengthened by removing a grievance which weakened its reasonable recognition in practice.

But if the attitude of the Commission to mental disorders be adopted, the great gain will be that the law behind the lunacy system will have for its predominant object not detention for the protection of the public, but the prompt and effective treatment of the mental patient. Public opinion, however, will need much educating before it will view mental disorder as mainly a medical question, and recognize that for its proper handling they must rely more and more upon the medical profession, as they do in the case of physical illness. The Report says:

# "It is remarkable that in the case of a form of disease probably more subtle and difficult of diagnosis than any other, the layman should insist on his right to sit in judgment on the expert." (p. 20.)

It might also be added that many neurologists and general physicians, who have barely a nodding acquaintance with mental disorders, are, in their own opinions, expert psychologists, though undoubtedly the largest body of psychological experts is constituted by the ordinary man in the street and the relatives and friends of mental patients. Nothing, however, is likely to be done to educate public opinion until the general practitioner knows more about the theory and practice of psychiatry, the necessity for which is commented upon strongly by the Commission.

The Report also raises the question as to what constitutes recovery. It very clearly and rightly points out that uncertifiability is not the criterion of recovery, any more than the stump which has just healed after amputation means that the scar is in a state to bear the stress of wear and tear. Speaking of recovery naturally leads us to think of convalescent patients and discharge. Without commenting at large here on the recommendations of the Commission, we cannot forbear from remarking that the Commission seems to have missed the main point of the usefulness of special and separate accommodation for convalescents. It assumes that its great purpose is to enable the medical superintendent to keep a watchful eye on convalescents to see that they are not detained after they are fit to be at large. Now apart from the comfort such accommodation affords to the convalescent, its real purpose is to test the extent of the convalescence. As our President pointed out in his address, a case on discharge requires as thorough an examination as on admission, and from the doctor's clinical point of view the patient has already lost all tangible symptoms of mental disorder before transfer to a convalescent villa or ward. What the

doctor cannot tell is the extent to which stability of mind and nerves has returned. He proceeds to test this in a practical way. He sends the patient to environmental conditions as nearly approaching those of the patient's home and outside life as is possible in an institution, commonly for a fixed period of time, and if the patient survives this ordeal and the reports of the visiting doctor and nursing staff are satisfactory, the next test is a period of actual trial at home. In the latter matter he is also guided by a report of the patient's home, which the After-Care Association can, in most cases, supply.

The Commission in handling "care" and the administrative problems relating thereto has, happily for us, deserted the traditional attitude of the lawyer and the prejudiced layman, and tried—with remarkable success for the most part—to view them as medical questions. It has not, however, on some points achieved the view-point of the modern clinical psychiatrist and the modern psychiatric hospital. A good deal of the complicated medical administrative machinery of a mental institution could be scrapped if the public would pay for a better organized clinical service and the employment of higher graded psychiatrists, such as appropriately paid clinical directors. This can be done without impairing the supreme responsibility and leadership of the head of the hospital—the medical administrator.

We are glad to see that the Commission recognizes the importance of the unity of psychiatric work, and that it is impossible to separate the problem of the care and treatment of the incipient and recent cases from that of the great body of the mentally afflicted. It decides against a special department of the Ministry of Health being created to deal with the former, entrusting to the Board of Control the welfare of the latter.

We had occasion to write strongly on this subject during the time Dr. Addison was Minister of Health. We note that Sir Maurice Craig, whose bond fides we have never questioned, in a reply to a question on this matter put by the Commission, said that the Board of Control having adopted the modern views of psychological medicine, etc., he was now of the opinion that it was the body best fitted to undertake the supervision of all classes of mental patients, including those in the early stages of illness.

While on this subject of the Board of Control, the Association will need to examine very closely the Commission's views as to mandatory powers the Board should have in regard to the administration of the mental hospitals by the local authorities. In these pages we have paid many tributes to the efficiency and fine work of the Board, especially having regard to its present depleted

personnel, and never was the Board so respected as now or its influence greater. Anything likely to interfere with the friendly co-operation between central and local authorities which now happily exists by very definitely altering this relationship to that of master and servant will be fraught with the risk that the objects sought for will be more difficult to achieve in the long run. Such interference with or control of the local government of the mental hospitals will need to be very strictly delimited, and should not extend further than questions relating directly to the care and treatment of the patients, and the furtherance of psychiatry in general. A national service for mental disorder is just as unthinkable as a national medical service—both would be wet-blankets to progress and enlightenment. Clearly, however, the Board's hands should be strengthened in order to deal effectively with local authorities who flagrantly neglect their duties in regard to the insane and mentally defective, but whether this should extend to visking all the domestic and other regulations of a mental hospital in the form of rules is another matter. We doubt very much whether the "Big Four" (or "Big Five") of the suggested augmented Board of Control could possibly give personal attention to these matters, so that in reality the work would devolve on much humbler fry, with the usual results, i.e., a narrow view-point, hair-spitting, red tape and constant bickering.

It is convenient here to comment on the Commission's Recommendations regarding a strengthening of the Board of Control. Of all the Recommendations of the Commission we are least enamoured with those dealing with this matter. We have looked in vain for any mention of the widespread feeling that the central authority should no longer be known as the Board of Control. This misnomer should not be perpetuated as it has no special applicability to the subject of mental disorder. All authorities. both central and local, are "boards of control" of something, and such a commonplace truism leaves too much to the imagination and gives rise to misconceptions, while it is lacking in informativeness. There is much to be said for and against the Commission's recommendation of a board of four, possibly five Commissioners and fifteen Assistant Commissioners. The Assistant Commissioners. having regard to the duties forecasted for them, would be properly named "Inspectors," and are evidently meant to rank as such by the pay suggested. But "inspector" is a bad term if applicable to the visitation of patients and not institutions, and is not to be commended. Still, if the proposed Assistant Commissioners are expected to carry out the visiting duties of the present Commissioners the salary offered is not likely to attract the best men for

the work, especially in regard to the visitation of large hospitals. At present the Commissioners are welcomed because the Board's personnel are men of such standing that the medical staffs of the mental institutions can look to them for advice and counsel, and it would be a misfortune were this likely to be changed, and official reporters substituted for physicians and lawyers of experience and repute.

The subject of central interest dealt with by the Report is undoubtedly that of the treatment of mental disorders in their earlier phases. This, again, centres round the facilities for such treatment and the kind of accommodation best suited to the needs of the cases.

As to the latter, for some years now two principal views have contended for supremacy among members of our Association. the one view, the public mental hospital was to be a back number in regard to the treatment of early and possibly curable cases (a minority view). In the other the public mental hospital was to undergo more and more hospitalization, both structurally and administratively, and all cases of mental disorder as far as possible were to be admitted there direct, or, if this was not in the majority of cases practicable, through the medium of special receiving houses. In the former view psychiatric departments or special psychiatric institutions attached to voluntary general hospitals and infirmaries. especially such as were teaching schools of medicine, were to receive and deal with all recent and possibly curable cases. There were views within these views, and these two principal standpoints had many and diverse ramifications. One subsidiary view was that these psychiatric clinics should be limited to voluntary cases and the so-called "non-volitional case" but not certified. Others would limit clinics to quiet cases, such as neurasthenics, psychasthenics, borderland cases of the psychoses, etc. Some would have them to be pucka acute hospitals, but attached to the general hospital and not to the mental hospital. Others, again, wanted them as annexes to the mental hospitals. All were agreed that the Poor Law Authorities should be excluded from this service, and that pauperization should not be a necessary preliminary to the treatment of mental disorders.

It would take pages to describe the many views put forward. The great majority of members, however, found themselves in agreement with the broad proposals set forth in the Association's *Précis* of Evidence before the Royal Commission, in which most of the contending views were so adjusted as to form a really practical scheme sufficiently plastic as to be applicable in principle to the varying needs of different localities and districts. There still remained,

however, some extremists in the two main directions we have described, unreconciled and unsatisfied.

On the whole the views of the Association as regards an early treatment service have prevailed, though the Recommendations of the Commission differ from those of the Association chiefly by reason of the modifications rendered necessary by the extinction of the "non-volitional" case. In these pages, whenever opportunity has occurred, we have always impressed upon our readers the fact that no rigid system of dealing with recent and acute cases has any chance of general acceptance. This also was strongly emphasized by our President in an address before the first Conference on Lunacy in January, 1922, when he said, referring to the many schemes which had been put forward:

"If we wait for the treatment of incipient insanity until any one of these schemes finds favour with the whole country we shall have to wait for ever. There is no reason why Colonel Goodall's scheme should not be carried out in South Wales if they want it. But why should these sections clamour for everybody to adopt their suggestions? The important point is what can counties, cities and localities do—what is the immediate possibility, and what are their wishes in this direction? Whatis wanted from the Legislature is authority to deal with the incipient insane, and to allow the local authorities to do the work in the manner in which they can afford, and in the way in which they wish it to be done." "Counties and districts have difficulties and needs peculiar to themselves, and the actual measures called for will vary accordingly."(1)

If the Legislature accepts the recommendations of the Commission this authority and plasticity of operation will be forthcoming, and are assured in the following extracts from the Report:

"We also consider that a duty should be imposed upon the local authorities to provide special accommodation for the temporary reception, observation and treatment of new cases under provisional treatment orders. It is not practicable to particularize the form which such accommodation should take. The needs and existing facilities in different areas will be found to vary widely, and different expedients may be appropriate. The purpose of the suggested special accommodation can, however, be indicated with precision: it is intended to ensure on the one hand that new cases shall not be received in Poor Law accommodation, and, on the other, that patients who are likely to make an early recovery without full certification shall, if possible, avoid going to a mental hospital. In large centres of population the authorities may find it possible to provide special receiving houses, as was proposed by the London County Council in Bills promoted in 1903 to 1905. But if a public mental hospital has a separate reception block, adequate provision may perhaps be made there for these cases. Or again, the local authority may be able to

<sup>(1) &</sup>quot;General Improvements in Lunacy Administration, including the Grouping of Areas for Certain Purposes," by Lt.-Col. J. R. Lord, C.B.E., M.B., Proceedings of the Conference in Lunacy, January 20, 1922, p. 107.

arrange with a private institution or a general hospital for the accommodation of patients under provisional treatment orders. The nature and extent of the provision must, however, be subject to the approval of the Board of Control. We do not contemplate that patients would normally remain in a receiving house for longer than one month. If the treatment order is extended with a view to six months' treatment, it may be necessary to remove the case to a public mental hospital, registered hospital, licensed house, general hospital, nursing home or single care." (pp. 140-1.)

"We specially recommend that they should have power to provide or arrange for the provision of clinics for out-patient and in-patient treatment of incipient cases. This might be effected by the establishment of clinics ad hoc or in association with receiving houses or public mental hospitals or registered hospitals; but in our view these clinics can, with most advantage, be associated with the general hospitals. Again, we do not desire to prescribe too narrowly the lines on which this provision should be made. Subject to the approval of the Board of Control the powers should be sufficiently wide to enable various expedients to be tried. The schemes for the treatment of tuberculosis and venereal disease afford a useful analogy for the general lines upon which this new service might be developed."

(p. 141.)

As regard facilities for treatment, the principle of voluntary admission to all mental institutions, general hospitals, nursing homes and to single care is accepted. No medical recommendation is ordered, but all such cases are to be notified to the Board of Control, who will have the duty of visiting them and giving any directions they deem proper. From the wording of the Report we presume that this visit is to be a special and personal one. It is further recommended that there shall be a report on the voluntary patient sent to the Board every six months. There is power conferred to "detain" the voluntary boarder for 72 hours after he has indicated in writing his desire to leave, and for one month after he ceases to have volition. We frankly regret that a visit from the Board of Control has been ordered and not left to the Board's discretion. Such a visit is not required from the Board in the case of certified patients, not even when certification is provisional. Why should every patient admitted to the Maudsley Hospital receive a special visit from the Board of Control? Why cannot the Visiting Committee and Medical Superintendent be held responsible for their welfare?

Then the imposition of a six-monthly report seems quite unnecessary, and may prove an obstacle to the ambition of many of us that as many as possible of the patients in mental institutions

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shall be on a voluntary basis. We think the realization of this ambition is one way of removing the stigma associated with residence, either present or past, in these institutions. There are many chronic patients whose mental state varies very little who appreciate that they need the care of a mental hospital, who would be willing to accept such a basis; many of whom, for instance, would be very distressed and break down if it were hinted to them that they might be turned out to face the world again.

It should be so arranged that nobody should know except the patient and his friends, by the mere fact that he is or has been in a mental hospital, whether he is or has been certified as mentally disordered or not. To such an institution could then be linked up facilities for the rate-aided treatment of all nervous disorders, both functional and organic, and mental hospitals could thenceforth be known as hospitals for nervous and mental disorders, and but little or none of the present stigma could survive for long.

We should have liked to see three principles adopted by the Commission in this relation. They have adopted one which we consider to be very important, i.e., in fully certifying a patient who has not been admitted on a provisional treatment order a statement has to be made that the patient is not likely to recover within six months, and that a full certificate is necessary. The second one is that prior to certification of any kind a statement should be made to the effect that the patient will not accept voluntary care and treatment. This should also apply to all continuation orders. The third one is that the Board of Control should be relieved as far as possible of all responsibility in regard to voluntary boarders, and a very definite responsibility for the personal welfare of the latter placed upon the local authorities and their officers.

The Report questions "whether real volition in the full sense can be attributed to any person who is, ex hypothesi, in a morbid condition." It says:

"We think that provision in regard to voluntary boarders should be limited to those persons who have volition." "Our intention is that the voluntary boarder system should apply to persons who are able to appreciate their position and desire to co-operate in their treatment." (p. 51.)

Why demand more from the mental than from the physical patient under such circumstances? How often do we obtain in the latter case willing co-operation? It is just because of the absence of this in many cases that "hospital" and not "home" care becomes necessary. One great advantage of hospital care is the strict observation maintained to see that the doctor's orders are

obeyed. Most physical cases enter hospital reluctantly and detest the whole thing, and submit because they think or are advised that it is necessary, and with this "volition" we are quite satisfied. Similarly in mental cases, it is the volition determined by reason, not by desire, that should be required of the voluntary patient proposing to enter hospital, and the same volition should activate him throughout his stay. Some voluntary patients decline to sign a declaration "I desire to enter," but will sign one worded "I am willing." It is the difference between "desire" and "acquiescence or consent," and which is all-important in that it may be the deciding factor between certification and voluntary treatment.

The Lunacy Act, 1890, Section 229, talks of a boarder as "a person who is desirous of voluntarily submitting to treatment." The great point appears to have been missed by both the framers of this section and also of this Report, and that is: Does the mental patient require indoor treatment—i.e., admission and retention—to cure his complaint? If so why split hairs about its materialization? Can any blame be attached to a person who, short of intimidation or physical coercion, actually obtains a consent say from one suffering from gangrene of a limb to removal to hospital and subsequent amputation? Should such essential treatment be held up because the patient feels reluctant to undergo it or to co-operate in it? Yet from a community interests' point of view it is much more important to preserve a person from chronic mental disorder than a person from the results of gangrene, and to the individual a voluntary or uncertified status in a mental institution is much less damaging than the stigma of certification. As we have said, the important point is the necessity for indoor treatment. There must be prima facie evidence of this first, and, if the patient will not consent to undergo it then he must be certified and detained, for in both his own interest and in the interest of the community the treatment must be carried out. As to whether such treatment is necessary, a letter from a mental out-patient department or a general practitioner would be helpful in coming to a decision.

Learned arguments regarding volition—the will—which the legal mind delights in should not interfere with common-sense action. We tackled this question in our last review of the Report of the Board of Control (vide Journ. Ment. Sci., October, 1925, p. 561).

The practical point to which we directed attention was summarized in the following words:

"An intricate point has been raised as to whether a mentally afflicted person can legally sign a contract to dispose of himself as a voluntary patient. The present Lunacy Acts speak of 'boarders,' not 'voluntary boarders,' and, as regards licensed houses, a person who is not in any way mentally disordered can become a voluntary boarder if he is a relative or friend of a boarder. Licensed

houses can therefore receive two types of boarders, and in both cases official consent must be sought by the boarder himself. There is no actual contract, but an application for admission to a mental institution and a 'consent' thereto by those authorized by the Lunacy Act to give it. However, the law recognizes that a voluntary patient mentally afflicted can demand and obtain his discharge, and it follows that it cannot reasonably deny the legality of his demand for admission."

If the voluntary boarder system extends considerably, as it probably will, there will be plenty of work found for the fifteen Assistant Commissioners upon whom we suppose the duty of visiting them will devolve. The Report says that in addition to visiting they shall "give any directions which they deem proper." What this means is not indicated. Certainly the Board should be allowed discretion as to whether a special visit is called for or not. It is not the voluntary patient we envisaged in the same review as needing the maternal care of the Board of Control, but the "non-volitional case." Our words were:

"We think that a non-volitional case, whether admitted so or becoming so afterwards, should be notified to the Board as representing the legal authorities. The Board should act as guardian by periodic inquiries, and visitation if necessary, until a satisfactory disposal be effected."

We recognize to the full the Board's responsibility in the case of detained patients, whatever be their mental state, but see no advantage in their intervention in individual cases which are retained only, and not detained except for the period under certain conditions allowed by law. This is, of course, apart from the Board's interest in the efficiency of all institutions caring for mental patients.

The Association has declared in its Prècis of Evidence that "the authority for detention, discharge and continuation orders should entail the responsibility of some authorized person not acting in a medical capacity." In regard to this, the Commission's Recommendations leave the position in statu quo—chiefly on the ground of impracticability. We think that the views of the body of men every day in touch with these matters should have carried more weight with the Commission. The Association carefully considered its Recommendations from a practical point of view, and came to the conclusion that there would be no real difficulties in carrying them out. The decision of the Commission is to be regretted from another point of view.

At the present time it can be truly said that no private certified patient is detained in a mental institution except with the tacit consent of his relatives or friends, unless he is suffering from mental affliction of such a severity as to be considered by the medical officer and higher authorities dangerous and unfit to be at large.

It seemed to the Association very desirable that the same should be able to be said of the detention of the rate-aided certified patient. Hence their recommendation that the discharge of the latter should, as in the case of a private certified patient, be vested in the petitioner envisaged in the Association's Recommendations re certification. The popular idea, not without basis as the law stands, that the rate-aided patient is detained solely by the action of the medical officer (or, as hinted by the Commission, possibly by his inaction) would have no foundation, and the medical officer would be regarded not so much as a doctor gaoler, but as a physician.

There is much to be said for sharing with his relatives or friends the responsibility of the hospital authorities for the mental patient's detention. If this came about the position of the doctor would then be more in keeping with his profession, while the relatives or friends of the patient and the general public, as regards most cases, would be robbed of the opportunity of blaming the doctor as the sole obstacle to patients returning home. The detention of a patient suffering from mental disorder would also approximate more to that commonly necessary in cases of severe physical disease and therefore facilitate the abolition of the stigma of lunacy.

We must now conclude our preliminary observations of this Report as rapidly as possible.

There will be universal regret that the Commission has not seen its way to endorse our Association's Recommendation in regard to the admission and retention, for limited periods, of "non-volitional" cases and minors in psychiatric clinics, nursing homes or in single care on notification to the Board of Control but without certification. We were in hopes that Dr. C. Hubert Bond, in that remarkable Presidential Address for 1921, an address which is still the key-note of the Association's policy and which now acquires greater value than ever, had been convincing on this point. He said:

"The truth is that against possible unauthorized detention, whether for personal profit or—as is much more likely—for the sake of carrying on treatment, the real protection, apart from the ordinary common-law remedies, is not in forms and procedure, but in supervision (facility for inquiry and visitation) and power to take such action as seems called for, in the hands of those who have the requisite experience and independence." (Journ. Ment. Sci., October, 1921.)

The argument against the Association's Recommendation is the weakest pleading there is in the Report. Indeed, the general sense of the Report is decidedly in its favour. The door, however, is not entirely closed, as is shown by the following abstract from par. 107 of the Report:

"If we were free to consider exclusively the medical treatment of the patient, we should have little hesitation in accepting this suggestion. But it is a principle of English law that the liberty of the subject may not be infringed without the intervention of some judicial authority; and we doubt whether public opinion is ready to countenance a departure from it. It may be that ultimately the treatment of mental illness will be so assimilated to the treatment of physical illness that the participation of a magistrate will no longer be considered necessary. But we are concerned to recommend reforms which may be practicable in the immediate future; and we have come to the conclusion, though not without reluctance, that the provisional treatment order should be made by a magistrate."

It will be remembered that the Association recommended, in regard to unwilling cases, the substitution of the seven days' urgency order now applicable to private patients, and the three days' removal and detention in a workhouse permissible in the case of a rate-aided patient, by a provisional treatment order and certificate lasting three days without judicial authority, which might be extended for a further period not exceeding twenty-eight days by reference to the latter authority or to two members of the visiting committee of a public mental institution. After that, failing recovery, there might occur the voluntary procedure, the "non-volitional" procedure or full certification on petition as the case might indicate.

This procedure was also to be used not only on the ground of urgency, but in any case, private or rate-aided, needing temporary care, observation and treatment.

The Association felt that in regard to the detention of unwilling cases, seven days was too long a period without some reference to a judicial or semi-judicial authority. The Commission's Recommendations go further than those of the Association, and include an emergency order applicable to all cases, whether private or rateaided, in addition to a provisional treatment order. This emergency order is valid for seven days, and in regard to private cases virtually re-enacts the present urgency order. It will be noticed, however, that it substitutes seven for three days' detention in the present emergency procedure applicable to rate-aided cases under Section 20 of the Lunacy Act.

The institutions into which voluntary and provisional treatment order cases can be received are identical and include any special accommodation provided by the local authority, but in regard to the provisional treatment order cases general hospitals, nursing homes or in single care require the approval of the Board of Control.

General hospitals and nursing homes are not to detain fully certified cases, but included among the places at which the latter can be detained is Poor Law accommodation if leased by the local authority from the guardians and approved by the Board of Control.

As regards accommodation for emergency cases, the only reference to this is in the paragraph dealing with the special accommodation to be provided by the local authorities in the form of reception houses (para. 113(b)). It is presumed, however, that failing this they could be received into any of the present mental institutions.

To return to the provisional treatment order as recommended by the Commission. Like that recommended by the Association, it applies to cases likely to recover within a short period of time, and allows detention for one month in the first place on reference to a judicial authority (exclusive of the emergency detention without judicial authority), but in a favourable case it can be extended for a further five months—a period of six months in all of provisional treatment. This, of course, is an advance on the Association's provisional order, which terminated after thirty-one days, but regard must be had to the fact that the Commission's provisional treatment order applies to all involuntary cases, *i.e.*, "nonvolitional" and unwilling cases, both of which must be likely to have an early recovery.

If in any proposed legislation the "non-volitional" case, as a separate category, is definitely rejected, then the proposals of the Commission for dealing with all involuntary cases likely to recover early seem not only practicable, but as good as we can reasonably expect—perhaps more so.

We are pleased to note that the Commission gives its blessing to the movement initiated at Horton Mental Hospital in 1922 (1), fostered both financially and by actual participation in by the Society of the Crown of Our Lord, and having for its main objective the bridging of the gap between mental hospital life on the one hand and the home life and public at large on the other, by the appointment of voluntary unofficial mental hospital visitors of suitable training and experience. This desirable movement has gone ahead in the London County Mental Hospitals and in some of those in the provinces, and will be strengthened by the fillip given by Recommendation XIX, headed "Contact with the Outside World" (vide p. 165, also par. 186).

With these brief remarks, brief, because of the multitude of important matters dealt with in this Report only a few have been touched upon, we commend it for the serious consideration of the

<sup>(1)</sup> Vide Journ. Ment. Sci., April, 1923; also Minutes of Evidence, vol. ii, Lord, 17, 266 to 17, 276.

Association and the public as an honest and painstaking effort to put on a correct and therefore sounder footing the care and treatment of those disabled from exercising full citizenship by reason of mental disorder. Though the document is full of high ideals, the attitude of the Commission has been essentially that dictated by common sense and practicability, and we congratulate the Commission on a piece of work of a very high order.

# Part II.—Reviews.

Psychological Medicine: A Manual on Mental Diseases for Practitioners and Students. By Sir Maurice Craig, C.B.E., M.A., M.D.Cantab., F.R.C.P.Lond., and Thomas Beaton, O.B.E., M.D.Lond., M.R.C.P.Lond. London: J. & A. Churchill, 1926. Fourth Edition. Demy 8vo. Pp. xiii + 437. 25 Plates, some in colour. Price 21s. net.

Those, and there are many such, who have followed the evolution of this manual on mental diseases from its first appearance in 1905 through its second and third editions to its fourth and latest, just issued, cannot fail to have noticed that it has always faithfully reflected the psychiatric views of the times. Throughout there has never been any attempt to force on the reader views personal and peculiar to the author in regard to the theory and practice of psychological medicine to the detriment of the teaching commonly accepted, which has been one of the main causes of its popularity and undoubted usefulness to both student and practitioner. Craig's Psychological Medicine could always be depended upon for sound, reliable and up-to-date instruction and information, erring, as all the best text-books do, on the conservative side.

The extensive practical experience of the author has, nevertheless, ever been embodied in his manual, and above all the ideals and basic principles which underlie, consciously and unconsciously, all his psychiatric activities. These ideals may be briefly stated to be the recognition and treatment of mental disorders in their earliest stages—which mean their arrest and possibly prevention of insanity—and the bringing of psychiatric knowledge and experience to bear upon the practice of medicine in its widest sense.

It is noticeable that Sir Maurice, whatever may be his startingpoint, both in his writings and speeches, nearly always returns to either or both these ideals; indeed, it may safely be said that his efforts towards their materialization are tireless and their success the main concern of his existence.

In the first edition of this work the intention is expressed that the students of psychological medicine, like those of other branches of medicine, shall first learn underlying principles, without which there can be no success in practice. This is still a distinctive feature in the authors' general treatment of their subject; and it has made it possible for them to present a psychiatry suitable to the everyday requirements of practice.

In fact in the new Craig and Beaton there is no change in any of these respects, yet there is a marked difference in the presentation of the fundamental viewpoint of mental disorder. The static and descriptive attitude which prevailed at the time when the original edition was published has yielded place to the more virile and dynamic psychological conceptions of modern times—a change foreshadowed in the second edition, and especially in the preface to the third edition, where the author remarks:

"Nevertheless, very steady progress is being made, and the war, entailing as it has done great strains upon a large number of men and women, has been the means of bringing in new observers, who are opening up fresh fields of study, and consequently the great developments in this branch of medicine which were foreseen and referred to in the preface of the second edition will take place even more

rapidly than one could have hoped."

For proof of the remarkable accuracy of this forecast one has only to look at the headings of the chapters in Section I of the present edition, devoted to biology, the first of which is on "The Nature of Purpose," and deals with the evolution of structure, adaptation and consciousness. Other chapters in this section are concerned with "The Unity or Individuality of the Mentally Active Organism," "Psychology," and "Mental Mechanisms," and throughout this and the sections which follow on "Causation, Classification and Symptomatology" and the "Biogenic Psychoses," the biological standpoint is emphasized as offering the most hopeful prospects of advance towards a more thorough and practical understanding of the problems of the mind disordered.

The classification adopted is that associated with the name of Dr. Thomas Beaton, one of the authors, the outstanding feature of which is the grouping together, based largely on the teaching of Bleuler, of dementia præcox, paraphrenia and paranoia, manic-depressive and involutional states as the "Biogenic Psychoses." These are graded in ontogenic epochs, with which their evolution is biologically associated, as the "Biogenic Psychoses of Adolescence" and "Of Maturity," "The Syntonic Reactions," and "Involutional and Senile Conditions."

By this arrangement one is enabled to envisage a large section of mental disorders at once as a whole, and in symptomatological groups. It is difficult to describe briefly and in suitable words how such a biological presentation illuminates one of the most difficult problems which besets from the first the student of psychiatry, *i.e.*, the relationship of the principal, if not the majority of, cases of madness to each other, and how the conception of the unity of mental disorders (like the unity of the mind) is consistent with such a diversity of external manifestations. It enables him to see that the tune, likewise the instrument, is always the same in essentials, and that its endless variations depend upon ancestry, quality, training, efficiency, experience, durability, age, etc., of

one and the same instrument—in other words, on its dynamic possibilities.

The scope of the manual remains much the same, though it has been almost entirely re-written. It is difficult to single out sections or chapters for special mention. The psychological and clinical sections are excellent. The chapter dealing with laboratory work is an important one, and impresses on the clinical psychiatrist the necessity for serological and hæmatological examinations, and the usefulness of inquiry into the state of the basic metabolism and protein sensitivity, especially in confusional states. The whole book goes to support the plea for team-work in mental cases, urged in the Presidential Address to our Association in July last.

As a literary product the style is easy and fluent, yet concise and free from jargon and stiltedness, and easily sustains the interest of the reader.

The reviewer has been interested in trying to distinguish in the text the sage counsels of the more experienced author and the brilliant and more hypothetical notions of his younger confrère, who has done so much to render intelligible, to popularize and to show the practical bearings of dynamic conceptions in abnormal psychology.

In places this is not a difficult matter, but for the most part they are most harmoniously blended so as to be wholly inseparable—an assimilation rarely achieved in works of dual authorship.

In conclusion, it can well be said that the book before us is the most constructive effort as regards psychiatric manuals or text-books of purely British authorship that has appeared since the clinical lectures of Sir Thomas Clouston in 1883, and we congratulate both authors on this fact. It is to be regretted that space at present does not permit of an adequate notice in the pages of this Journal, but that pleasant duty is only postponed for a further edition, a call for which will no doubt soon be made.

All one can say now is that it is a restrained, reasonable and convincing presentation of the biological viewpoint of psychological medicine, mainly having regard to its bearing on prophylaxis and treatment, and it will go far to convince those who still cling to static and materialistic notions of the fruitfulness of dynamic conceptions in psychology, both normal and abnormal, which are becoming more and more dominant in modern psychiatry.

J. R. LORD.

Mental Invalids. Being the Morison Lectures delivered before the Royal College of Physicians of Edinburgh in June, 1925. By C. C. EASTERBROOK, M.A., M.D., F.R.C.P.E., Physician-Superintendent, Crichton Royal, Dumfries. Edinburgh and London: Oliver & Boyd. Med. 8vo. Pp. 80. 5s. net.

Here is one of those valuable books—none too common—which represents the thoughts and work of a lifetime. Can a man offer anything of higher value than this to his fellow men? Is not the world much richer thereby than if the gift took the form of gold

and precious stones? Yet, how little is this appreciated by many reviewers, who fail to distinguish such works from mere monographs or epitomes of other people's ideas and dismiss them cavalierly with a few words of condemnation or praise. But to review them seriously is often difficult because of the space available to the reviewer, and the present is a case in point.

Those who know Dr. Easterbrook personally are not in any doubt as to his sincerity and earnestness of purpose, and this is well exemplified in these his Morison Lectures, which treat of that all-important subject, of late very prominent before the public and the medical profession, namely, the mind in health and disease.

Easterbrook's name should ever be remembered, for was he not the first in this country to lay stress on the value of the treatment of acute mental disorders by rest, open air and sunlight?

He thus established one of the main pillars of the modern mental hospital.

It is a good thing from time to time to draw attention to present-day pioneer workers, lest the credit due to them for their achievements is either assumed by, or in default of historical data allotted to, others of a later generation. One thus calls to mind the abiding work of F. A. Elkins, who taught us how to nurse those of the mentally afflicted who have dirty and other obnoxious habits, thereby cleaning up and sweetening our mental institutions; also G. M. Robertson's successful strivings in regard to the better nursing of the insane, and the advent of the trained mental nurse, and T. F. K. Stansfield's work in connection with villa hospitals.

Others could be mentioned were the time more appropriate, but here we would say let the young worker not forget to look up his subject historically, and he will be saved many pitfalls and gain a better prospective. Pioneer work for those mentally afflicted did not end with the early efforts of a Tuke, a Pinel or a Conolly, much as we revere them. Successive generations have added their builders and designers to the psychiatric structure, as yet by no means completed.

We therefore give this book of Easterbrook's a specially hearty welcome, and trust it will be widely purchased and read. These lectures are written in a language which is remarkably clear, and has the virtue of simplicity despite the condensation which has been found necessary. Questions are not raised merely to show that they are unanswerable—a miserable practice so common nowadays in psychiatric works—but really difficult problems (and there are many whenever one contemplates the mind in any relation) are bravely tackled and some answer essayed or solution suggested, and as a rule very much to the point.

The general viewpoint adopted is dynamic, hormic, and not without a spiritual element, but the facts of physics, chemistry, anatomy and physiology are never lost sight of, and the psychogenic and physiogenic brought in close approximation in their biological significance. The human being is dealt with as a biopsychic unit and social creature in the first lecture, which is appropriately entitled "The Body-Mind." Lecture II forms two

chapters devoted to the clinical examination of mental invalids and the causation of mental diseases and their prophylaxis respectively. There is much to be said for Easterbrook's view that there is a real practical advantage in regarding the primary ætiological factors, not as heredity and stress, but as the nervous constitution, inherited or acquired (predisposing), and stress (exciting). He applies the two clinical methods of general medicine to psychiatry, namely, the historical or life-history method and the observational method. The third lecture deals with classification as based upon, not one, but many fundamental principles, forming a true nosological or natural classification, and one which he has found very serviceable in practice.

There follows what is perhaps the finest lecture, and which concludes the series—one on some aspects and methods of curative treatment. Here our author is in a dominion peculiarly his own. He is a strong advocate of the psychiatric clinic and voluntary

treatment in mental hospitals.

We have said sufficient to indicate the extent of the ground covered by these lectures, and as for the rest, readers must see for themselves, but we can promise them with confidence much of the greatest interest and no disappointments.

J. R. LORD.

The Clinical Examination of the Nervous System. By G. H. MONRAD-KROHN, M.D.Oslo, M.R.C.P.Lond., M.R.C.S.Eng. With a Foreword by T. Grainger Stewart, M.D., F.R.C.P. London: H. K. Lewis & Co., Ltd., 1926. Third edition, crown 8vo. Pp. xvi + 201. 52 Illustrations, including 16 plates. Price 7s. 6d. net.

It is difficult for text-books to keep pace with the advance being continually made by such a progressive science as clinical neurology, especially when so broad a conception is taken of its scope as to include matter which strictly comes within the province of psychiatry. We would be the last, however, to complain of the mutual assimilation of neurology and psychiatry, for a sound knowledge of one is necessary to the other, and vice versa, or both are apt in practice to go astray—often much to the detriment of the patient. It is well known to Monrad-Krohn, who has considerable psychiatric experience, that to proceed to a neurological examination without first investigating the patient's mental state is an absolute waste of time, so he makes sure, by placing the mental examination first in the series, that those who follow his neurological clinical system shall not go astray on this point. Other reasons for this we mentioned in our original review (vide Fourn, of Ment. Sci., Oct., 1921, p. 505).

We cannot conceive why the author retains the use of the word "cerebration" for "mental state," unless it be modesty, and to show that as a neurologist he has no desire to pose as a psychiatrist. Even taking the most materialistic view of mind, "cerebration" includes much more than mental functioning, and we regard the

term as discredited, and one which could well be forgotten as misleading and of no practical use. As far as we can discover, "cerebration" was first brought into prominence in England by Engledue in 1842, who held that there was no such thing as mind, only "cerebration" or cerebral function. He was one of those teachers, fortunately now becoming rare, who deny the existence of everything of which he has no knowledge or cannot understand—a defence mechanism for ignorance and mental insufficiency. Our author knows a good deal about the mind, so he need not use a term for the latter favoured by those who deny its existence. We notice that the term is rejected by Dr. Mourque in the French edition.

However, we had not meant to say any of this, but to point out that the taking of a broad conception of neurology not only entails keeping pace with the advances made in that subject, but of reflecting, too, those of one equally virile and progressive, namely psychiatry—hence the necessity for frequent revision and new editions.

This work was first issued in 1921 and has arrived already at its third edition, and since the appearance of its second edition it has been revised for a French edition, issued in 1925, a copy of which was duly forwarded to the Journal for review. (1)

All this shows that the author not only keeps faith with his readers and endeavours to supply them with the most recent knowledge on the subject, but also that the latter put a high value on his work by acquiring it. It seems inevitable that a work of this kind should grow, but the increase in size and to some extent in text (from 148 pages to 201) is again accounted for by the addition of more illustrations (from 33 to 52). This, together with the enhanced usefulness which follows, repays the slight increase in cost from 6s. to 7s. 6d. net. We again express the hope that both size and price will be kept well within bounds, for the work is becoming more and more appreciated by students and young neurologists, who find its use more convenient than the bulkier manuals, which in essentials and for practical purposes have but little more to tell.

We can renew our advice to mental hospital and other psychiatrists, if they have not already done so, to make use of this manual as being specially suitable for the neurological examination of mental cases, and if they have a previous edition to replace it by this, the latest, as being thoroughly up-to-date. They will also find much sound and useful information as regards the method of conducting a mental examination.

J. R. LORD.

<sup>(1)</sup> Technique Clinique d'Examen Complet du Système Nerveux. Par G. H. Monrad-Krohn; Preface du Docteur Souques, Edition Française par Docteur R. Mourque, de Nimes. Paris: Libraire E. le François. Crown 8vo. Pp. 216. 33 illustrations. Prix 12 fr.

Lehrbuch der Psychologie von Friedrich Jodl. Fünfte und sechste Auflage im Verein mit W. Börner, H. Henning, V. Kraft, K. Roretz, W. Schmied-Kowarzik, H. Werner. Besorgt von Carl Siegel, Czernowitz. Stuttgart and Berlin: J. G. Cotta, 1924. Buchhandlung nachfolger 9½ by 6½. Two volumes, 394 and 498 pages. Price M. 20 each.

The first edition of Jodl's book appeared in 1896. It was a very good book, well planned in conformity with the aim the author had in view, a good text-book giving the essentials of the facts and theories of the philosophical study of psychology of that time.

Since then the development of the science of psychology has been enormous. Psychology of to-day is in every respect—also as a teaching subject—widely different from that of 1896.

It is of course a highly laudable undertaking that a number of pupils jointly continue publishing subsequent editions of a late beloved and great teacher's standard work. It enlists everybody's sympathy. And yet, how often is it not doomed to failure! How seldom, if ever, does it become a success! It is impossible that a book written jointly by a number of different authors, even the best, can ever attain that homogeneous and well-balanced composition which goes to make a first-rate book from a didactic point of view. The book before us is no exception in this respect. One does not recommend it as a student's book. Nevertheless it is by no means a failure; it is on the contrary very good as a book of reference, and can be warmly recommended as such. Some parts of it are brilliant, most parts quite good.

The work is divided into two parts—a general and special. The former comprises 178 pages of the first volume; the rest of the first volume and the whole of the second are given up to the second or special part. The general part comprises the following three chapters: I. Purpose and Methods of Psychology; II. Body and Mind; III. Description and Analysis of the Phenomena of the Conscious in General.

In the different chapters of the special part the authors deal with perception, the particular qualities of sensation, elementary feelings, elementary volitional phenomena, secondary phenomena (memory, reproduction, association), the chief psychical products of reproduction (time, space, outer and inner world), speech and thought, feelings and volitional phenomena of a more complex character ("Die Gefühle der sekundären und tertiären Stufe,"

"Die Willenserscheinungen der sekundären und tertiären Stufe").

In the chapter on Mind and Body ("Leib und Seele") the dualistic conception is discussed, only to be rejected in favour of

a conception called "Zweiseitentheorie" or theory of identity, a

theory vaguely reminding us of Spinoza—as far as we can see a cross-breed between Spinozism and materialistic monism.

The chapters on perception and the different qualities of sensation contain many things of great interest—perhaps more interesting to the neurologist than to the psychiatrist, however.

The bibliographic index considerably enhances the value of the

work as a book of reference. That it is not quite complete is probably due to "post-war difficulties," as hinted at in the introduction.

The medical psychologist generally evaluates a text-book from two main points of view of a distinctly practical character. (That he is entirely justified in doing so is a different matter.) He will ask: What wisdom can be gleaned from its pages (1) with regard to mental hygiene, and (2) with regard to the understanding of mental disorders? In this respect the book does not quite give what one expects of a modern text-book. Academic questions are given far more attention than the more practical ones.

As regards the Freudian psycho-analysis, one would have expected to find it subjected to a fuller discussion in a book of this size. Yet the good points of this book are far in excess of those open to criticism, and, as already stated, it can be warmly recommended as a book of reference—though not as an introduction to psychology.

G. H. Monrad-Krohn.

Contribution a l'Étude des Syndromes de la Region Thalamique. Par PIERRE HILLEMAND. Paris: Jouve & Cie., Editeurs, 15, Rue Racine, 1925.

This monograph is a most interesting and valuable addition to our knowledge of this all-too-little-known region of the central nervous system. The author divides his work into five chapters. The first chapter deals with the development and anatomy of the thalamic region, and includes a description of a most ingenious method which the author has evolved for studying the blood supply to nervous tissue. It consists of a process of injection of the blood-vessels, with subsequent stereoscopic radiography, and the results, which appear to be accurate and trustworthy, are the foundation of the author's thesis. The second chapter is an analysis of the various symptoms which may be met with in thalamic lesions, and which the author classifies as sensory, motor and accessory. Chapter III is an anatomo-clinical study of the various syndromes recognized by the author, while the following chapter gives the pathogeny of the two best recognized of these: viz., the thalamo-geniculate and the thalamo-perforated. Chapter V is the full report of fifteen cases which have come under the author's observation, and includes post-mortem findings and histological reports of some cases.

The author comes to the following conclusions:

- 1. The thalamic syndromes are practically always secondary to lesions of the posterior cerebral artery, and should be regarded as syndromes of this vessel.
- 2. The thalamus is supplied by five small arteries, each of which is made up of a number of arterioles; while their origin, chiefly from the posterior cerebral, varies slightly, their termination is constant and their distribution fixed. They are the thalamogeniculate, retro-mamillary, pre-mamillary, choroidian and lenticulo-optic.

- 3. The thalamic syndromes are due, not to regional, but to vascular lesions, and therefore depend on the distribution of the vessels. Usually it is the trunk of the posterior cerebral itself which is the site of the lesion, and the position of the lesion relative to the communicating artery of the circle of Willis is all-important.
- 4. Injury of the thalamus can manifest itself, not as formerly believed by a single syndrome, but by a number of these, of which, however, only two can be definitely isolated and accurately described and understood. The first of these is due to a lesion of the region irrigated by the thalamo-geniculate branch of the posterior cerebral, which supplies the inferior part of the postero-lateral nucleus, the geniculate bodies, and the anterior part of the pulvinar, and, when complete, is characterized by the following elements: motor syndrome (contracture, troubles of co-ordination, chorco-athetoid movements), sensory syndrome (pains, troubles of objective sensibility), so-called accessory signs (slight hemiplegia, vasomotor troubles, hemianopia, alexia).

The second well-recognized syndrome is secondary to a lesion of the retro-mamillary or thalamo-perforated branch of the posterior cerebral, which supplies the inferior part of the internal nucleus, the red nucleus and the cerebellar tracts to the thalamus.

It shows itself by troubles of co-ordination and tremors of the intention type, to which are sometimes added choreo-athetoid movements and sensory troubles.

The other thalamic syndromes are rare, and at present are very little known and poorly classified.

- 5. It is of interest to note the contrast between the intensity of the clinical symptoms and the small size of the thalamic lesions. The pathogeny of most of the symptoms is known. The anæsthesia is due to the destruction of the sensory cells at the posteroexternal part of the thalamus, whereas the characteristic pains are due to irritation of these cells. The intention contracture and the choreo-athetosis are, in the author's opinion, due to a lesion of the intra-thalamic cerebellar tract of the superior cerebellar peduncle, and not to the striate body as usually held. He considers a lesion of the splenium of the corpus callosum important in relation to the alexia sometimes present, and shows that the hemianopia is usually due to a lesion of the cuneus.
- 6. There is nothing to be gained by the recent attempt to isolate a sub-thalamic syndrome. Apart from the thalamo-perforated syndrome, which is thalamic-subthalamic, the cases published as belonging to this syndrome really belong to the thalamo-geniculate syndrome. Lesions localized in the subthalamic region would appear to be extremely rare and their clinical manifestations unknown.
- 7. Our knowledge of the physiology and pathology of the anterior part of the thalamus and of the internal nucleus is practically nil, but there is some evidence in favour of the hypothesis that the mental symptoms usually found in thalamic lesions are due to lesions of the internal nucleus, which is noted to be rich in cellular groups of a vegetative nature.

8. These findings do not relate to hæmorrhages or tumours of the optic thalamus, which of course do not lend themselves to any systematization.

P. K. McCowan.

# La Mélancolie, Clinique et Thérapeutique. By R. Benon. Paris: Gaston Doin, 1925. Cr. 8vo. Pp. v + 143. Price 10 fr.

Melancholia is liable to such varying phases and complications as to obscure the diagnosis. Dr. Benon shows clearly that one of the commonest complications which is liable to arise in the course of melancholia is secondary asthenia. Asthenic states were more particularly brought into prominence by Tastevin in a series of articles which appeared in 1911-13. As it is obvious that the author has accepted Tastevin's conclusions and embodied them in his book, we propose in this review to pay special attention to them.

Referring to the so-called "manic-depressive" group of psychoses, Tastevin maintains that mania is not the opposite state of melancholia any more than, to the practised observer, remorse is the opposite of exaltation. The opposite of exaltation is asthenia or hyposthenia; exaltation is, in consequence, a hypersthenia. It follows (I) that periodical psychosis is not composed of mania and melancholia, but of mania (or hypersthenia) and asthenia (or hyposthenia); (2) that melancholia is an affection which merits a separate clinical description and an appropriate treatment.

Dr. Benon considers that Kraepelin made a gross clinical error when he included melancholia in his manic-depressive syndrome. Whether Tastevin's views on periodical psychosis will be ultimately accepted or not is doubtful. But we would venture to suggest that, if it were more generally realized that asthenia is liable to occur in the course of melancholia, both the diagnosis and the treatment would be made less difficult.

Secondary asthenia when it complicates melancholia may not always be obvious because of the complexity of the morbid picture, but occasionally it may be a prominent feature of the disease. The asthenic state, characterized by retardation of the psychic processes with difficulty of memorizing and general diminution of muscular strength, is above all determined by the intensity and persistence of emotional pain. It develops slowly and increases progressively. Sometimes, masked by delusional and anxiety states, it is not easy to recognize or to demonstrate its presence. In less difficult cases the patient complains of exhaustion, prostration, dejection, weakness, loss of memory and confusion of thought. Melancholic stupor is the result of profound secondary asthenia determined by the intensity of moral pain. The treatment of asthenia resolves itself into rest and the avoidance of unnecessary fatigue.

Dr. Benon's little book should be most useful to the general practitioner as well as to the psychiatrist. With the exception of the asthenic state, which is described in detail and from various points of view, the subject-matter differs very little from our English text-book descriptions of melancholia.

NORMAN R. PHILLIPS.

A Clinical Handbook of Mental Diseases. By W. S. JAGOE SHAW. Calcutta: Butterworth & Company, Ltd. Pp. 202 + xxix. Crown 8vo.

The author has been superintendent of the asylums at Poona, Rangoon and Lahore, and is Lecturer on Mental Diseases at Poona Medical School. The book opens with an elementary introduction to psychology; then follow chapters on ætiology, the forms of insanity, the psychoneuroses, mental disorders in India, feigned insanity, and the legal aspect of mental disorders. An appendix contains notes on the conveyance of mental cases to England, copies of the formal certificate used in India, and plans of mental hospitals suitable for the East.

The author makes the following observations derived from his long experience:

He tells us that the manic phase of manic-depressive insanity is more common in India than in Europe. Cannabis indica comes second as a cause of insanity; it is smoked as "ganga" with tobacco in the proportion of I to 3. The ganga habitué is known by his purple lips, his suffused conjunctivæ, "the presence of a callosity on the outside of the last phalanx of the right thumb or over the right unciform, due to the constant rubbing up of the ganga and tobacco in the left palm," and he "inhales the smoke of his chillum in a long pull, which would bring on violent coughing in another person." Col. Shaw has never seen insanity in a woman due to hemp, and he has known of only one European addict whose disorientation was peculiar in that, seeing the author inverted, he spoke to him from between his legs.

The prevalence of dementia præcox among Parsees is due to intermarriage of cousins in order "to keep the money in the family." General paralysis is an uncommon sequel to syphilitic infection; "the existence of malaria may possibly account for the low incidence of general paralysis of the insane in the tropics." It is true that the spirochæte is easily killed by heat, but whether the degree of heat developed in fever is sufficient to destroy it is very doubtful. Many of the assassins, the political, religious and philosophic fanatics of India are paranoiacs; paranoia does not exist among the educated Indians. The microcephalic mental defectives known as "Shah Doula's mice" are peculiar to India, and their limitation to the Punjab and United Provinces "suggests that the type propagates its peculiarities (the rat-like head)." There is a very large number of deaf-mutes—a total of 16,628 in Bombay Presidency alone. Hydrotherapy is largely used, but unfortunately natives are very liable to collapse during the bath. The incurability of the private patient in India as compared with the recovery-rate among the poorer classes is attributed "to the continuous saturation of the former with sedative drugs before admission." The higher castes and more educated natives resent even slight manual labour while resident in the hospitals, and the European patient tends to follow this custom "if allowed to do so."

The voluntary boarder is encouraged, and even the destitute

native may enter the hospitals in this manner. Classification is a difficult problem, and one out of three of the usual types of female cases requires single-room accommodation. Hospitals to accommodate 1,000 patients are recommended.

This small volume contains all the essential facts relating to psychiatry, is written in a pleasant conversational style, is practical, and can be recommended to any medical man proceeding to the East.

H. DE M. A.

The Third Annual Report of the Inspectors of Lunatics for Northern Ireland, 1924.

The total number resident in the six district asylums at the end of 1924 was 4,060, comprising 2,163 males and 1,897 females. These figures show an increase of 38 and 29 respectively as compared with those at the end of the year 1923.

The admissions for the year were 402 males and 404 females, showing a decrease of 21 and 13.

The increased asylum population was mainly due to a diminished number of discharges, the figures being 403 for 1924 and 487 in 1923.

The percentage-rate of recoveries as estimated upon the number of admissions came to 33.9%—a decrease of 4.2%. The deaths at 336 show an increase of 8. There were not any escapes. In only one case did death occur from suicide, and this happened from an injury which was self-inflicted prior to entering the asylum concerned. One case of accidental death occurred in a patient who was drowned while crossing a river in an attempt to get away.

Cases of enteric still continue to occur in one city asylum, to which the Inspectors in previous reports have drawn attention concerning the antiquated nature of the buildings. It is hoped that the Committee of Management may see their way to extend their branch establishment and so obviate the use of the older building.

The most striking feature of the report, however, does not concern the well-managed district asylums and the patients housed therein, but the insane patients living in the various workhouses. In one year these patients have increased from 204 to 384, and apparently no completely satisfactory explanation of this increase is forthcoming. The areas concerned are Belfast, Londonderry, Newry and Omagh. It is consoling to note that the patients in the workhouses inspected were found to be comfortably dressed, well cared for and generally contented.

Turning to the financial aspect, one finds that the total receipts amounted to £202,242 6s. 3d., of which £133,958 16s. 8d. came from local rates. The gross expenditure, including that incurred through repayment of loans for capital charges, came to £220,940 10s. 5d.

The net annual average cost per head, excluding loan repayments, was £42 14s. 8d., showing a diminution of over £1 per head in comparison with the year 1922-1923, and of £5 7s. 9d. as compared with the preceding one.

Juvenile Delinquency in London. London County Council Publication [No. 2441]. London: P. & S. King & Sons, Ltd., 1926. Pp. 40. Price 2s.

The Education Committee of the London County Council, as the responsible authority, has now published the evidence presented by them to the Departmental Committee in the Treatment of Young Offenders. In the main this report consists of a summary of those provisions of the Children's Act, 1908, which relate to the committal of children and young persons to certified schools, and the procedure in relation thereto, together with statistical tables. These show that stealing or offences punishable by imprisonment form by far the most frequent cause for appearance before a juvenile court in the two years under review, 1922-4, i.e., 67% of the total. Boys largely preponderate in this class of misdemeanour, i.e.,

63.7% as against 3.3% girls.

The chief interest, however, of the report lies in the appendix by Dr. Cyril Burt, who shows by tables and a map that while there is a high correlation between juvenile delinquency and poverty, yet "this is not so high as investigators trusting mainly to general impression have implied." The greatest incidence of juvenile crime is to be found in Finsbury, where the annual percentage of juvenile offenders is nearly 5 per 1,000, "and the number of adult offenders and professional criminals seems to be correspondingly high." "Anyone acquainted with the purlieus of St. Luke's and the neighbouring parishes in Clerkenwell will realize how suitably and centrally situate these districts lie as a strategic base for nefarious projects of every kind. There is a second and a broader zone a little further south, namely the southern portions of St. Marylebone, of St. Pancras, of Islington, and of Hackney. The worst of these are located in the slums that have grown up near the termini of the big railways. In the main, however, directly the line of the Regent's Canal is crossed moral conditions appear to improve rapidly." The districts most free from juvenile offences are the City of London and the residential suburbs.

One interesting fact which emerges from his table of the local incidence of juvenile delinquency is the marked differences in the percentages of illegitimate to total births in the various Metropolitan boroughs. Westminster heads the list with a percentage of 11.8, followed by St. Marylebone (10.9) and Holborn (10.0). Yet in each of these areas the total birth-rate is comparatively low. On the other hand, Bermondsey, Poplar, Stepney and Bethnal Green, despite their high percentage of population living in poverty and high birth-rate, show exceedingly low illegitimate birth percentages (2.2, 2.3 and 2.5 respectively). The causes of these differences are highly complex, and herein, as Dr. Burt says, is a fruitful problem for further research.

G. A. AUDEN.

Proceedings and Addresses of the Forty-Ninth Annual Session of the American Association for the Study of the Feeble-minded. Edited by Howard W. Potter, M.D., and published by the Association, 1925. Demy 8vo. Pp. 365. Price \$2.00.

This Association was organized in 1876 to study and investigate the cause, prevention, instruction, care and general welfare of the mentally deficient in America. For many years this Association published the only journal concerned entirely with these matters; its pages contain important pioneer articles, are full of the effort and thought of competent investigators—the researches of Seguin along physiological and psychological lines, the administrative experiments of Kerlin, the pathological inquiries of Wilmarth, the introduction of mental tests by Goddard and the lifelong devotion of Fernald are all recorded there—and form a fund of information which no one interested in these matters can afford to ignore. Indisputably they serve to show how varied and how wide is the

appeal of the study of the feeble-minded.

There are 27 original papers in the present volume, which range from a characteristic contribution by Dr. Henry A. Cotton on the "Relation of Focal Infections to Crime and Delinquency," to an equally characteristic and charming address by the Rev. Bernard W. Spilman on "Religious Training for the Feeble-minded"; from "Family Studies on Mongoloid Dwarfs," by the authoritative Dr. Charles B. Davenport, to an enthusiastic account of her work by Miss Inez F. Stebbins, A.B., A.M., the Supervisor of Colonies and Paroles of the Rome State School of New York, the centre of that latest and most enterprising of experiments in community supervision; from a consideration of "Mental Defect and Poverty," by Dr. Thomas H. Haines, the Director of the Division on Mental Deficiency of the National Committee for Mental Hygiene in America, to a "Review of the Literature on the Brain Pathology of Mental Deficiency," by the Editor of these Proceedings. Special school work and institutional criteria, anthropometric findings and psychological tests, the relation of endocrinology to the blood chemistry of aments and the study of psychoses in the feebleminded—all these matters form the subjects of intriguing papers. but where so much is of quotable value the space at our disposal prevents our being able to accord to any and to each its due appreciation. In every way this volume is worthy of its predecessors, and a useful addition to their enlightened company.

But there is one notable difference. The recent history of the study of the feeble-minded in America is the history of the life and work of the late Dr. Walter E. Fernald, and in this volume is written the last chapter of that strenuous achievement—an affectionate and well-merited tribute to the genius of one who was "a much beloved friend, a distinguished member, and a brilliant leader of this Society." It is accompanied by a popular photograph, and serves to characterize this volume as one of the more distinguished of its kind, marking a milestone in the progress of the understanding of the least of these his fellow-men, to the service of whom his life's work was so rich a contribution.

H. Freize Stephens.

# Part III.—Epitome of Current Literature.

### 1. Neurology.

A Case of Tabo-Paresis with a Curious Deformity of the Lower Jaw [Un cas de paralysie générale et de tabes avec déformation particulière de maxillaire inférieur]. (Bull. Soc. Clin. de Méd. Ment., July, 1923.) Colin, H., Cénac and Péron.

The patient, a male, æt. 43, had syphilis at 19, and showed typical tabo-paretic signs. In addition he suffered from a deformity of the lower jaw, consisting of a broad spur about I in. square growing downwards and backwards from the angle of the lower jaw, associated with marked hypertrophy of the masseter, temporal and anterior belly of the digastric muscle on each side. There was some porosity and thinning of the other parts of the bone.

At the age of 20 the jaw outline was apparently normal, and this overgrowth appears to be due partly to a nervous champing habit of long standing and partly to the disordered nutrition of bone common in tabes and general paralysis.

W. D. CHAMBERS.

Twelve Cases of Conjugal or Paraconjugal Neurotropic Syphilis [12 cas de syphilis neurotrope conjugale ou paraconjugale]. (Bull. Soc. Clin. de Méd. Ment., July, 1923.) Marie, A.

After a reference to the literature, twelve cases of neurotropic syphilis affecting persons living as man and wife are described. Either tabes or general paralysis resulted in each case.

W. D. CHAMBERS.

The Oscillometric Index and the Oculo-cardiac Reflex; Control by Electro-Cardiogram [Courbe oscillométrique et réflexe oculo-cardiaque; Contrôle électro-cardiographique]. (L'Encéph., April, 1925.) Fribourg-Blanc, A., and Hyvert, M.

A paper recording the results of the oculo-cardiac and solar reflexes in 174 cases, illustrated by diagrams. The former was elicited by means of the instrument of Roubinovitch and the results recorded by electro-cardiogram. Special note was taken of changes in the oscillation range of the blood-pressure during and after the ocular stimulus.

The authors describe their technique, and conclude that ocular pressure causes an increase in the range from maximum to minimum of the arterial pressure in 97% of cases, apart from and unrelated to modifications of cardiac rhythm. As a rule the actual arterial pressure is increased. A marked increase in the index indicates peripheral vaso-constriction of sympathico-tonic nature. Ocular compression stimulates various reflexes affecting either the sympathetic or parasympathetic system according to the neuro-vegetative tone of the subject.

W. D. Chambers.

Syndromes of the Anterior Cerebral Artery [Les Syndromes de l'Artère Cérébrale Antérieure]. (L'Encéph., April, 1925.) Foix, Ch., and Hillemand, P.

A study of the anatomy of the anterior cerebral artery, and of the results of complete or partial lesions of it, illustrated by three pages of photographs and 19 drawings. A full description of the artery and its branches is given, and it is pointed out that it constitutes practically the sole blood supply of the anterior seveneighths of the corpus callosum, as well as of the neighbouring part of the centrum ovale.

The syndrome resulting from obliteration of the artery is found in three degrees: (1) A simple crural monoplegia, corresponding to a simple cortico-subcortical lesion; (2) hemiplegia with marked crural predominance, due to a subcortical lesion penetrating deeply in the central ovale; and (3) crural monoplegia with left unilateral ideo-motor apraxia, due to an accompanying extensive lesion of the corpus callosum.

Four cases in illustration are fully reported.

W. D. CHAMBERS.

A Theory of the Mechanism of Inhibition in the Central Nervous System [Une théorie sur le mécanisme de l'inhibition dans le système nerveux central]. (L'Encéph., May, 1925.) Ramsay Hunt, J.

From analogy with the vegetative nervous system, the author considers that there must exist in the central nervous system cells the sole function of which is inhibition, and he believes that these cells are type II of Golgi. He founds his theory on his observations that in Huntingdon's chorea the small cells (type II, Golgi) in the striate body are degenerated or reduced in number, while the large motor cells are normal, whereas in Parkinsonism the motor cells in this area are atrophied, the smaller cells being normal. He concludes that inhibition is more likely to be the function of type II cells throughout the central nervous system than others suggested.

W. D. Chambers.

General Paralysis and Miliary Gummata [Paralysie Générale et Gommes Miliaires]. (L'Encéph., May, 1925.) D'Hollander, F., and Rubbens, T.

A detailed account of an atypical case of general paralysis in which miliary gummata as well as the typical signs of the disease were found in the cortex after death. References to similar cases are given and the article is illustrated with eight plates.

W. D. CHAMBERS.

A Case of Chronic Acro-Asphyxia [Un cas d' Akroasphyxie Chronique]. (L'Encéph., May, 1921.) Obregia, Al., and Urechia, C.

The literature of vaso-trophic neuroses is reviewed, and the case of a tuberculous precocious dement suffering from this condition

of the fingers, named by Cassirer "acrocyanosis chronica anæsthetica," is described and illustrated. Tactile sensibility is normal, but sensations of heat and pain are impaired. The fingers are swollen, cyanosed, cold and sometimes moist. There is no ædema. The red cells are normal and the whites normal in number, but show monos. 15%, lymphocytes 26%, eosinophils 11.5%.

The authors agree that the condition is very similar to the catatonic pseudo-œdema of M. Dide and are unwilling to form any definite conclusions.

W. D. Chambers.

Myoclononus and Poliomyelitis in a Case of Hebephrenia of Some Years' Standing [Myoclonies et poliomyelite chez un malade atteint d'hébéphrénie depuis plusieurs années]. (Bull. Soc. Clin. de Méd. Ment., March-April, 1926.) Guiraud, P., and Lelong, P.

A boy, normal up to the age of 16, gradually developed signs of hebephrenia—change of character, taciturnity, lack of interest, delusions of suspicion against his relatives, and stereotyped speech. Four years later the patient's lower limbs became paretic and the ankle- and knee-jerks were abolished. The muscles were wasted, and myoclonus of the facial muscles developed. The authors, although unable to come to a diagnosis, believe they are dealing with a nervous disorder, responsible for both the mental and physical symptoms. They remark that cases of schizomania (Claude), in which category they incline to include this patient, not uncommonly develop catatonic symptoms or obvious signs of organic nervous lesions even years afterwards. In such cases a psychogenic explanation does not account even for the mental symptoms.

J. S. Annandale.

Three Cases of Pyknolepsy [Trois cas de pyknolepsie]. (Bull. Soc. Clin. de Méd. Ment., 1926.) Marchand, L., and Bauer, E.

The authors define pyknolepsy as a nervous disease of children of from 4 to 12 years, characterized by attacks with the following symptoms, viz.: Inhibition of the psychic functions, flexion of the legs, ocular spasm with fixity of the pupils, blinking of the eyelids, deviation of the head to one side, involuntary micturition. The number of paroxysms may amount to 30 a day, and may persist for years without affecting the physical or mental development of the child. The attacks sometimes cease spontaneously. The ordinary epileptic remedies have, as a rule, little effect. The authors describe three cases, in two of which the use of gardenal led to the cessation of the attacks. The other patient, on one occasion, developed a typical epileptic seizure. They are of opinion that pyknolepsy is a form of infantile epilepsy.

J. S. Annandale.

A Household of General Paralytics [Un ménage de paralysie générale]. (Bull. Soc. Clin. de Méd. Ment., 1925.) Marie, A., and Bernadou.

An account of an instance of conjugal general paralysis along with another probable case of the same kind. The authors believe

that such cases are much more numerous than one imagines. In commenting on the ætiological factors involved, they indicate their preference for the hypothesis of an infection by a neurotropic type of organism rather than for the theory that the tissues are particularly vulnerable to the spirochæte.

J. S. Annandale.

A Series of Cases of Epidemic Hiccough in the Asylum of Villejuif [Sur une série de cas de hoquet épidémique à l'asile de Villejuif]. (Bull. Soc. Clin. de Méd. Ment., 1925.) Trénel, M.

A short description of an outbreak of epidemic hiccough in an asylum. The author discusses the relation of this disorder to epidemic encephalitis, and concludes that it has been well established that they are forms of the same disease.

J. S. Annandale.

Vegetative Disturbances in Post-encephalitic Syndromes and their Relationship to Diencephalic and Mesencephalic Lesions: Changes in Basal Metabolism. (Journ. of Nerv. and Ment. Dis., March, 1926.) Naccarati, S.

Out of 47 cases presenting post-encephalitic syndromes 60% showed alteration of basal metabolism. Of these, 53% showed an increased rate, whilst only 3 cases had a metabolic rate below the normal average. The author connects the alteration in the metabolic rate with changes occurring in the vegetative centres located in the grey matter surrounding the third ventricle and the aqueduct of Sylvius. Metabolic functions are located in very complicated organs pathways and centres, which form a chain going from the internal organs, endocrine glands, through the sympathetic nervous system to the vegetative centres of the mesencephalon and basal ganglia. Naccarati suggests that the high percentage of increased metabolic rates is due to the lesions affecting the centres controlling catabolism. Vegetative functions are to the mid-brain what the psychic functions are to the cerebral hemispheres. The more important they are, the more they depend on the interaction of other functions which are anatomically located in other centres. Sometimes we have to deal with a mechanical obstruction by inflammatory exudate giving rise to a transient polyuria. As the exudate is absorbed, so the polyuria recedes. In the majority of cases there is a permanent alteration on these pathways or centres leading to the permanent and progressive syndromes we are all so familiar with.

Isolated or combined permanent symptoms such as obesity, polyuria, glycosuria, hypothermia, suggest the specificity of some areas where the nervous element involved in each of these functions meet, thus constituting trophic, secretory, thermic centres. The frequency with which somnolence is met in epidemic encephalitis indicates that the sleep function is connected with many vegetative functions, but is too complex to be localized in a single cerebral centre.

G. W. T. H. Fleming.

#### 2. Psycho-Pathology.

A Study of the Psychogenesis of Confirmed Stammerers. (Journ. of Nerv. and Ment. Dis., March, 1926.) Clark, L. Pierce.

The author points out that the majority of stammerers show their defect of emotional expression as soon as they step out of the environment of the home and mingle with others on the playground or in school. Clark considers that the misuse of the organs of speech shows the "blurred functions" of the acts of nursing in operation. In two cases of stammerers that Clark analysed there was a fixation upon the act of nursing. The majority of confirmed stammerers develop a sort of jargon before they attempt normal speech. This speech is developed from the persistence of the sounds and practices of the nursing act. Under excitement in after-life they relapse to the crudest patterns of nursing behaviour.

Clark does not hold out much hope for these people, because they are often enormously narcissistic and cannot make a sustained transference. All stammerers are oral erotics, the oral character formation being always interwoven with other reaction formations against the primacy of the instinctive impulses to such, to soil and to void.

G. W. T. H. FLEMING.

# 3. Clinical Psychiatry.

Exhypnagogic Lilliputian Hallucinations [Hallucinations lilliputiennes exhypnagogiques]. (Bull. Soc. Clin. de Méd. Ment., 1926.) Trénel, M.

The hallucinations had the characteristics as described by Leroy—small figures clothed in bright colours, pleasant to look upon and in motion. In contra-distinction to hypnagogic hallucinations the patient experienced them on waking, and the author thus coins the word "exhypnagogic" to describe them. Memory played a part in the construction of the hallucinations, as the patient, who had at one time lived in Portugal, recognized the costumes of the figures to be similar to those worn by peasants of that country.

J. S. Annandale.

Syntonic Temperament occurring in Successive Generations [Constitution syntone suivie pendant plusieurs générations]. (Ann. Méd.-Psychol., May, 1926.) Xavier and Abély, P.

The authors have been able to obtain particulars of the mental constitution of the ancestors of a case of mania as far back as the French Revolution. The details were culled from family memoirs, letters, etc. There is evidence of a remarkable similarity of mental constitution (syntonic) transmitted directly through several generations, and in each becoming more accentuated and aggravated, until in the present generation it manifests itself in a definitely pathological state (acute mania). This case illustrates the conception of Bleuler and Krestmer that between the syntonic state,

a normal condition, and mania, a pathological condition, there is an infinite number of gradations. The syntonic adapts himself to his environment, but when this adjustment is upset the reactions become more numerous and more intense, and a state of maniacal exaltation ensues. The clinical truth of this mode of evolution from a normal syntonic state to a pathological condition, either in the individual or in the course of successive generations, is undeniable, but is not an absolute rule, e.g., one brother in a family may develop a periodic psychosis, while another may suffer from schizophrenia. Frequently the paternal hereditary taint simply produces an indefinite predisposition which serves as a basis for the development of any type of mental disorder.

J. S. Annandale.

Pleasure and Deterioration from Narcotic Addiction. (Ment. Hyg., October, 1925.) Kolb, Lawrence.

Opiates do not produce mental pleasure in stable persons except the slight reflex pleasure resulting from the relief of acute pain; but in most unstable persons they produce mental pleasure during the early period of addiction, and the degree of pleasure depends on the degree of instability. Many addicts experience a pleasurable physical thrill following the injection of morphine or heroin; in normal persons this is slight if it occurs at all. Cocaine may produce pleasurable stimulation in both normal and abnormal, but only slightly so in the former. Much of the moral deterioration attributed to narcotics in the past was not deterioration, but an accentuation of an original nervous instability and moral obliquity. Mildly psychopathic individuals deteriorate more than any other class of addicts. No preparation of opium produces any appreciable intellectual deterioration. Cocaine is more harmful than opiates, and its long-continued use is destructive both to the physical and mental well-being of any type of person.

H. DE M. ALEXANDER.

Syphilis in the Ætiology of Mental Deficiency. (Ment. Hyg., October, 1925.) Dayton, A. Neil.

The author subjected several thousand cases of mentally defective and non-mentally defective children to the Wassermann test (blood), and his conclusions were: (1) Positive Wassermann in mentally defective children, 7.9%; (2) positive Wassermann in non-defective children, 5.3%; (3) in only 1.7% of 1,631 positive cases could the mental defect be considered as due to congenital syphilis uncomplicated by other major ætiological factors; and (4) syphilis is a negligible factor in the ætiology of mental deficiency.

H. DE M. ALEXANDER.

Legal Presumption of Onset (of Disease) and Military Pensions. [Présomption légale d'origine et pensions militaires]. (Bull. Soc. Clin. de Méd. Ment., May, 1923.) Cénac.

The history of a man, æt. 36, alcoholic since youth and of alcoholic heredity, with a bad record of drunkenness, police convictions,

desertions, etc., sent to the asylum from the local police court. He is unstable, but not insane. He is drawing a full disability pension, and the author asks if this is not an abuse, and how the patient should be disposed of.

W. D. Chambers.

Syphilis and Mental Disorders [Syphilis et troubles mentaux]. (Bull. Soc. Clin. de Méd. Ment., May, 1923.) Cénac.

A résumé of Wassermann tests of the blood and cerebro-spinal fluid and of Guillain's test on 188 consecutive admissions to an asylum. Of these the blood was positive in 29 and doubtful in 6, the cerebro-spinal fluid positive in 30 and negative in 5, and Guillain's test positive in 31 and negative in 4.

W. D. CHAMBERS.

The Legend of Kleptomania—A Fictitious Disorder of the Mind [La Legende de la Kleptomanie Affection Mentale Fictive]. (L'Encéph., June, 1925.) Antheaume, A.

This is a second paper on this subject, the former having appeared in the Ann. de Méd. Lég. of May and June, 1925. The author argues that true kleptomania (if it exists, which he doubts) would be an impulse to "take," but not to "keep." On extensive inquiry he found only three authentic cases in which restoration of stolen goods had been made in many thousands of undetected thefts. He quotes the morbid characteristics commonly ascribed to the kleptomanic theft, and denounces them as unconvincing. It is stated as a fact that kleptomania occurs only in France, and especially in Paris, where the large stores seek to protect themselves by employing spies and detectives disguised as shoppers. In London so-called kleptomania has been stamped out in an admirably practical British way, namely, by administering to the culprit, immediately on her detection, a gentle spanking.

The paper concludes with suggestions for the discouragement of this obsession in Paris, and with a number of amusing extracts from lay papers on the subject.

W. D. Chambers.

A New Form of Mental Puerility—Schizomanic Puerility [Sur une Nouvelle Forme de Puérilisme Mentale—Le Puérilisme Schizomaniaque]. (L'Encéph., June, 1925.) Claude, H., and Robin, G.

The description of the case of a woman, æt. 28, who, after a severe mental shock, developed a very marked puerile state. A close review of the literature of the subject is given. The authors conclude that morbid mental puerility is not necessarily a dementia præcox symptom, nor even schizophrenic, but that in some cases, as in the one described, it is "schizomanic"—that is, a state of mental regression with elaboration of morbid reveries more or less conscious. It is frequently, but not always, primarily toxi-infectious in origin.

W. D. Chambers.

Presumption of Onset (of Disease) and Mental Disorders [Présomption d'origine et troubles mentaux]. (Bull. Soc. Clin. de Méd. Ment., June, 1923.) M. Cénac.

Two cases are reported of men drawing full disability pensions and now in an asylum. One has been epileptic since 1912, and the other is a degenerate and chronic alcoholic of many years' standing, with numerous convictions against him.

The author concludes that disorders which are congenital or obviously date from before enlistment should be carefully discriminated (by Pensions Boards).

W. D. CHAMBERS.

A Case of Mental Degeneration, with Hypertrichosis [Un cas de dégénérescence mentale avec hypertrichose]. (Bull. Soc. Clin. de Méd. Ment., June, 1923.) Marie, A., and Bernadou.

The case of a male congenital defective, æt. 44. Puberty at 10 years, accompanied by hirsutism, which is now very marked, especially on the trunk and legs. The scalp is nearly bald. The features suggest hyperpituitarism, confirmed by X-ray. The patient's father was syphilitic.

W. D. Chambers.

A Case of Weak-mindedness with Hysterical Disorders [Un cas de débilité mentale avec troubles hystériques]. (Journ. Neur. et Psychiat., Num. Psychiat., 7.) Titeca.

The case of a "spoilt child," at. 23, showing chronic and resistive sciatica and muscular atrophy of the left leg, some loss of power of both arms, and marked wilfulness and generally troublesome conduct. Physical signs of organic disease were absent. After stretching the nerve, psychotherapy and firm regulation of his conduct brought about great improvement.

W. D. Chambers.

The Cure of Psychically and Morphologically Backward Children, with Underdeveloped Jaws, by the "Eumorphic Method" [Guérison des retards psychiques et morphologiques chez les enfants à facies dysthrepsiques par la méthode eumorphique]. (Bull. Soc. Clin. de Méd. Ment., May, 1923.) Robin, P.

The author believes that backwardness in children is constantly associated with deformities of the face, nasal fossæ, tongue, jaws, etc., and that the intellectual defect is a direct result of the morphological. He attaches particular importance to the maxillæ, and has designed special moulds to encourage the development of these where necessary. He has treated a large number of backward children with these, with sometimes the addition of endocrine therapy, and claims good results. He considers that actually defective and imbecile children could be treated in the same way with benefit.

W. D. Chambers.

- Two Cases of Paralytic Syndrome with Negative Reactions in the Body-Fluids [Syndrome paralytique sans réactions humorales]. (Bull. Soc. Clin. de Méd. Ment., February, 1924.) (1) Desport, (2) Serin.
- (1) An account, not very convincing, of a case of dementia with slight nystagmus and sluggish and unequal pupillary reactions,

diagnosed by the author as general paralysis, though Wassermann reaction and other tests are negative. The case clinically does not suggest general paralysis, and tumour of the corpus callosum was suggested in the discussion as more probable.

(2) The case of a syphilitic woman, æt. 47, with dysarthria, fixed and unequal pupils, exaggerated reflexes, mental enfeeblement and dirty habits, but without increased pressure, cells or albumen in the cerebro-spinal fluid, though Guillain's test is faintly +. The author suggests general paralysis or cerebral syphilis, but does not venture a diagnosis.

W. D. CHAMBERS.

Fugues and Perverted Instincts Appearing Periodically [Fugues et perversions instinctives à manifestations périodiques]. (Bull. Soc. Clin. de Méd. Ment., July, 1923.) Claude, H., Santenoise, D., and Targowla, R.

A detailed account of a boy, æt. 17, of insane heredity, who sustained a head injury in childhood. In the last four years seven motiveless fugues have taken place, and at these times he has shown marked temperamental changes, confabulation and lying, theft, violent temper, loss of affection, etc. Each attack was preceded by a definite prodromal period, in which insomnia, anxiety, depression, etc., occurred. During the attacks sugar tolerance is increased and the oculo-cardiac reflex is very marked, indicating a vagotonic condition. The authors do not consider the case epileptic, but call it an intermittent psychosis.

W. D. CHAMBERS.

The Oculo-cardiac Reflex in Psychoses of Passion [Le réflexe oculo-cardiaque chez les passionnels]. (Bull. Soc. Clin. de Méd. Ment., July, 1923.) De Clérambault.

The author defines psychoses of passion as those which are founded on a prolonged emotion, whether of desire or anger. The syndrome may be added to other psychoses, or may be autonomous. In two cases quoted the oculo-cardiac reflex indicated vagotonia, and the author invites others to make this test in suitable cases. He considers that these cases resemble mania in being vagotonic, but is unable to draw any conclusions.

W. D. CHAMBERS.

Paranoid Psychoses [Les Psychoses Paranoïdes]. (L'Encéph., March, 1925.) Claude, H.

This paper on the classification of chronic systematized delusional states begins with a detailed description of a case in an asylum for 24 years. The diagnoses made on this case on admission and at intervals since are stated and discussed. Kraepelin's conception of paranoid dementia is criticized, and Bleuler's schizophrenia, though approved to some extent, is not accepted. The author concludes that chronic systematized states of delusion should be divided into paranoial and paranoid psychoses. In the former there is not necessarily any element of degeneration, but the paranoial (paranoiac) temperament is more or less manifest. The cases in this

group may take different forms—the délire chronique of Magnan, hallucinatory psychosis, delusions of interpretation, of influence, and mixed forms with ideas of external agency—and they include erotomania, mysticism, persecuted, persecutors, etc.

In the paranoid class there are two sub-groups—hebephrenic paranoid dementia, a true hebephrenia with delusions, hallucinations and ideas of influence combined with intellectual enfeeblement; and schizophrenic paranoid dementia with incoherence and lack of systematization, deriving from certain affective complexes, and showing profound dissociation of the personality, but not true dementia.

A table setting out the distinctions between the groups is appended. W. D. Chambers.

Some Remarks on the Mental Disorders of Epidemic Encephalitis and the Parkinsonian Types [Quelques remarques relatives aux troubles psychiques de l'encéphalite épidémique et aux états Parkinsoniens]. (L'Encéph., April, 1925.) Mikulski, A.

The author pleads for a closer psychological examination of all cases of epidemic encephalitis. He does not agree that psychical disorders occur in the majority of cases of this disease, and in some cases apparent psychical disorders are only accidental. When a psychosis develops in the acute stages it is usually toxic. Sometimes apparent psychotic states may be secondary to motor implications. In the Parkinsonian stage states of stupor or dementia may be simulated. Myoclonic attacks or transient obnubilations may make the mental state appear worse than it is. Psychic fatigue also is often very rapid. Deterioration of character, especially in the young, is unfortunately very common. The author records two cases of suicide during a remission early in the Parkinsonian stage.

Hypercholesterinæmia in Senile Syndromes [L'hypercholestérinémie dans les syndromes séniles]. (L'Encéph., April, 1925.) Tinel, J., Dupouy, R., and Schiff, P.

Excess of cholesterin in the blood is practically constant in senile subjects, especially in cases of cerebral arterio-sclerosis, gangrene and dementia. It is independent of arterial hypertension, of the excretion of urea, and of the liver, nor does it correspond with the presence or absence of the arcus senilis. A large number of examinations is quoted, and cases are described showing the value of excess of cholesterin in the diagnosis and prognosis in senile cases.

W. D. CHAMBERS.

Clinical Applications of a Memory Test [Applications cliniques d'un test de mémoire]. (L'Encéph., April, 1925.) Weinberg, D., and Schiff, M. P.

The test in question consists in exposing to the subject 15 representations of familiar objects, which he must name aloud. After varying intervals the subject must recall as many as possible

and also select the pictures he recognizes from 42 others. It is claimed that this process tests fixation, recall and recognition. A normal graph has been made on the results given by the examination of 48 normal individuals. The authors claim that cases of dementia præcox (12) show a curve of normal shape, but lower than the normal level, and cases of general paralysis (15) still lower. They do not claim diagnostic significance for their test.

W. D. CHAMBERS.

Polyneuritic Avitaminosis following a Strict Vegetarian Diet Adopted by a Mystic Paranoiac [Avitaminose de forme polynévritique à la suite d'un régime végétarien strict adopté par une aliénée mystique]. (L'Encéph., April, 1925.) Trénel, M., and Vuillame, M.

The case of a woman, insane for some years, is described. She had recently returned from a "mission" to Africa, carried out in obedience to her hallucinations and mystic delusions. For four years she had lived on a most restricted diet of bread and boiled vegetables and some chocolate, and she persisted in this after admission, until she complained of pain in the pelvis and legs, and evident polyneuritis developed. When threatened with artificial feeding the patient gave in, took a mixed diet, and has since improved. The authors conclude she suffered from a polyneuritis due to lack of vitamines. They were able to exclude pernicious anæmia, and add that the electrical reactions in the convalescent stage were normal.

W. D. Chambers.

The Problems Presented by General Paresis. (Journ. of Nerv. and Ment. Dis., March, 1926.) Kraepelin, E.

Kraepelin points out that we are still ignorant of the essential nature of general paresis. In general paralytics, in contrast to the cerebral syphilitics, there is a progressive decay—the precise nature of which is still unknown to us. This decay is certainly caused by severe metabolic aberrations; the patients are unable to keep their nitrogen equilibrium and there is increased breakdown of complex bodies in the organism. Individual disposition appears to play an important part in the development of general paresis, as shown by its far greater frequency in men than in women-from 1:2 to 1:17, or even higher, although the frequency of syphilis in women is only slightly less than in men. General paresis in children is out of all proportion to the incidence of congenital syphilis. In children, too, the course is much slower, indicating that the youthful organism is better protected against the paretic process than the adult. The author considers that a natural protection against general paresis must exist, but that during the last century some changes must have taken place in the physical condition of the nations that have weakened the protection against general paresis conferred by Nature. Forty to fifty years ago general paresis was extremely rare amongst the North American negroes; to-day the incidence among the black population is almost equal to that among

the whites. Excessive alcoholic indulgence has always been considered a factor determining the onset of paresis, and Kraepelin reports as perhaps more than a coincidence that the Bosnians, who are Mohammedans, and therefore abstainers, rarely develop paresis, whilst the Croats, who are racially identical but are Catholics, commonly develop paresis. When we consider personal predisposition, we find that a history of psychoses in the family carries no weight whatever. Possibly embryonic lesions are concerned that cause a general inferiority towards later infection.

Kraepelin thinks that the metabolic insufficiency is responsible for the irreparable decay and for the failure of anti-syphilitic medication.

G. W. T. H. Fleming.

The Spinal Fluid in Epilepsy. (Arch of Neur. and Psychiat., March, 1926.) Patterson, H. A., and Levi, P.

These authors found that generally speaking there are few abnormalities in the fluids of epileptics. They found that the pressure was at the upper border-line of the normal, depended greatly on external influences, and in those punctures made during severe seizures rose very high. The pH varied little; the number of cells per c.mm. was low. Albumen was normal and globulin absent. Absolute sugar values were low—in every case the sugar in the fluid was lower than that of the blood. The ninhydrin reaction was positive in a number of cases in which no abnormalities were found, except in the colloidal curve. An unusually high percentage of positive reactions was encountered with colloidal tests. 91.5% reacted to colloidal gold, 66% to colloidal mastic and 83% reacted to colloidal benzoin. 49% were positive with all three reactions. The type of gold curve was that of cerebro-spinal syphilis in 97% of the gold curves.

They conclude that these results suggest the presence of some colloid precipitating substance in the spinal fluid of a high percentage of these patients. The nature of this substance is unknown.

G. W. T. H. Fleming.

#### 4. Treatment.

The Backbone of an Occupational Building for Men Mental and Nervous Patients. (Ment. Hyg., July, 1924.) Haas, Louis J.

This paper details the matters that an architect should attend to in designing a building to house the occupational-therapy activities of a mental hospital.

Sketches are shown of unsuitably designed buildings, and a plan is given of an ideal arrangement—style of interior, light, heat, capacity, exits, etc.

In the past certain patients have been employed in gardening, care of the grounds, working in the kitchen and wards, but little was done to meet the needs of the larger number of those to whom such work did not appeal. It was difficult to find occupation of interest to men especially, or to find persons competent to teach

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occupations to sick persons. The introduction of occupational

therapy has filled this gap.

Initiate the work with basketry, brush-making, chair-caning and carpentry. This group of four crafts forms the backbone of all that has been developed and found useful in the therapeutic employment of the sick man. Basketry is used for the group which needs the maximum of precautions; carpentry of those who need no precautionary measures; while brush-making and chair-caning meet certain needs between these two extrenes. like basketry, requires no tools. All that has been developed since the time when departments consisted of this four-craft skeleton is but an expansion out of this framework. These are the basic principles which should guide the construction of an occupational building: such an arrangement of the available floor space as will meet the need for various kinds of therapeutic workshops, and such an assignment of the various crafts that the requirement of precaution, of degrees of co-ordination and of susceptibility to the noises of audible crafts may be most effectually met. These basic principles cannot be made too clear or over-emphasized. Many other crafts can be added, and in one hospital whose departments are recognized as standards, there are thirty crafts in the men's divisions.

80%, including out-door workers, is the proportion of the daily population that may be expected to receive treatment in the occupational department. (The writer refers to 10% of these as "outdoor workers," which is surely much too low a figure.)

The floor space required for an occupational building is from 35 to 90 sq. ft. per head.

H. DE M. ALEXANDER.

A Plea for Greater Frankness in Dealing with Those who are Mentally Sick. (Journ. Ment. Hyg., July, 1925.) Sartwell, Ransom H.

The author relates a case in which recovery was retarded by the hoodwinking of the patient as to his real destination when he was removed to a mental hospital, and remarks that evasive and misleading statements made previous to the admission of a patient to a hospital are equally reprehensible when made by hospital physicians or nurses subsequent to admission. Even though these patients may show mental aberration, a "square deal" is just as much appreciated and just as efficacious with them as with normal people.

H. DE M. ALEXANDER.

Hospital Records: What May the Medical Officer expect from the Occupational Therapist Dealing with Mental Patients? (Occupat. Therapy and Rehabil., December, 1925.) Tiffany, William J.

Wherever any mental hospital attempts to formulate a plan for the systematic development of occupational therapy, the problem of recording the application and the results of such treatment sooner or later arises.

The case-records in mental hospitals have, in the past, contained only brief references to patients' occupations, and almost no references to the reactions of patients to certain kinds of work, and that work has seldom been prescribed with some definite therapeutic end in view. Patients have been utilized for years for the work that had to be done, but the work has seldom been selected for the patients.

It has not been customary for the instructors in occupational therapy to make notes regarding the effect of the work on the patients under their care, because these instructors have had little or no experience with mental cases.

The authors found by delivering a short course of lectures on mental symptoms to these instructors that they became much more keen and enthusiastic.

They were taught how to observe and what to note regarding the personal appearance, the attitude and manner, the trend of thought, the emotional reactions, the mental grasp and capacity of the patients while employed in the workshops.

H. DE M. ALEXANDER.

The Masculine Side of Occupational Therapy. (Ment. Hyg., October, 1925.) Haas, Louis J.

The difference between occupational therapy and industrial occupation is that in the former no task has to be performed, but for therapeutic reasons the patient must be employed; the task is selected to treat or employ the patient, whereas in the latter the patient is selected who can perform the task that must be accomplished.

A very interesting case is recorded where the intelligent interest displayed by a thoroughly trained occupational instructor in dissipating step by step the obsessions and false beliefs of a patient under his charge led to the complete recovery of the patient.

There are many openings for trained instructors in mental hospitals, where an average of 19% of the male inmates are unemployed.

H. DE M. ALEXANDER.

Some Aspects of Therapeutic Malaria. (Proc. Roy. Soc. Med., July, 1926.) Rudolf, G. de M.

This paper gives an account of some interesting recently-made observations. Investigations at Claybury show that an immunity to inoculated malaria can be established if one strain only of the parasites is used, and that the degree of immunity can be increased by repeated re-inoculations. Four patients who had been immunized to one strain developed typical malaria when re-inoculated with a new strain; in three of these cases spontaneous cessation of the paroxysms occurred. Spontaneous cessation, however, occurred in many patients inoculated for the first time.

It has been found that intravenous inoculation gives a much shorter incubation period than subcutaneous, and subcutaneous than intradermal, the parasites apparently being destroyed in the subcutaneous tissues. Figures are given which indicate that the length of the period is, in some degree, related to the number of parasites injected. No relationship could be found between atmospheric conditions and the length of the period.

A pre-febrile rise of pulse-rate has been observed in a number of cases. Mention is made of an erythrocytosis preceding the anæmia

in a series of cases investigated.

A sudden onset of pyrexia, believed by Korteweg to be indicative either of a relapse or of a previous attack, occurred in nineteen out of seventy cases of primary malaria. On the other hand, of thirty re-inoculations or relapses, all commenced the fever with a sudden onset. A relationship is noted between the number of parasites and the degree of pyrexia in any one patient.

Figures are given showing the greater tendency to relapse in

mosquito-inoculated cases.

A table is included which shows the greater value of the therapy in general paralysis of short duration.

J. C. RAMSAY.

# 5. Pathology.

A Cerebral Tumour (Glioblastoma) with an Initial Psychasthenic Syndrome [Tumeur cérébrale (glioblastome) avec syndrome psychasthénique initial]. (L'Encéph., April, 1925.) Marchand, L., and Schiff, P.

Clinical notes and post-mortem specimens in the case of a man, æt. 40, of previous good health, who began to suffer from doubts, obsessions, etc., eighteen months before admission. Retardation, coma and signs of cranial hypertension developed, followed by death. At the autopsy a glioblastoma of sarcomatous aspect was found, with general overgrowth of neuroglia and embryological nerve-tissue, but the situation of the tumour is not stated.

W. D. CHAMBERS.

A Note on the Glucose Balance of the Blood and Cerebro-spinal Fluid and the Symptomatological Value of Increased Glucose in the Cerebro-spinal Fluid [Note sur l'equilibre hémorachidien du glucose et la valeur sémiologique de l'hyperglycorachie]. (L'Encéph., April, 1925.) Targowla, M. R.

The author states it has already been proved that the absolute amount of sugar in the cerebro-spinal fluid is of no significance, but only its ratio to the sugar of the blood. This ratio has been stated by different observers to be I (Polonovski and Duvot) and 0.5 (Derrien). The author agrees with the latter, and found approximately this ratio in four cases of general paralysis. In several acute cases of psychoses, however, he found the ratio altered, and a comparative excess of sugar in the cerebro-spinal fluid (in a few cases absolute excess). He concludes by speculations on the origin of the excess sugar in the cerebro-spinal fluid.

W. D. CHAMBERS.

Toxamias Occurring in the Early Stages of Mental Disease. (Arch. of Neur. and Psychiat., March, 1926.) McIntyre, H. D., McIntyre, A. P., and Norris, R. J.

Examinations were carried out immediately after the admission of acute cases, most of whom were in the early stages. The chemical examination of the blood was confined to the urea nitrogen and the CO<sub>2</sub>-combining power of the plasma. Mild acid intoxications are extremely frequent in patients when admitted. Nearly all toxic psychoses show a marked depletion of the CO<sub>2</sub>-combining power, usually with urea retention. Several explanations are possible: Excitement with fatigue; impairment of kidney function by the toxin causing the psychosis, with a resulting failure of the kidney; and the fact that the toxin produced may be an acid and its presence in the blood will lower the alkali reserve.

The authors found that manic-depressive, schizoid and confusional reactions may, in their early stages, be accompanied by signs of toxemia. The elimination of this toxemia is frequently effective in bringing about a mental recovery. The brain is considered as a colloid-chemical emulsion of fats in a hydrated colloid protein. If the emulsion should be disturbed by toxins, acid or otherwise, the invisible fat particles coalesce to form larger particles, which are visible under the microscope, and we get the pathological picture of lipoid degeneration, fatty degeneration and fatty infiltration. Acid intoxication causes some of the proteins to swell, and others (the globulins) to be dehydrated and precipitated.

This yields the pathological picture of cloudy swelling, which, if it persists, is followed by fatty degeneration, and this is the irreversible point of the reaction.

G. W. T. H. Fleming.

Neuron Destruction in Post-encephalitic Paralysis Agitans. (Arch. of Neur. and Psychiat., January, 1926.) McKinley, J. C., and Gowan, L. R.

The authors, after indicating the difference of opinion which exists as to the *rôle* of the globus pallidus and the substantia nigra as the seat of the lesion in this syndrome, give their results in three cases studied by the micrometric method.

The neurons were counted by means of a Whipple's eyepiece micrometer disc previously standardized against a stage micrometer scale. The results of one worker were checked by the other, so the personal error was small. The difference between the estimated cell-count by inspection and the actual count was as much as 30-40%, so that estimates are of little value. They found minimal changes in the globus pallidus, but massive lesions of the substantia nigra. No decrease in the number of cells in the putamen or globus pallidus can be demonstrated. An average decrease in the number of neurons of from 58% to 87% occurred in the substantia nigra.

They conclude that the essential lesion was in the substantia nigra in the three cases studied.

G. W. T. H. Fleming.

A Contribution to the Pathology of Paralysis Agitans. (Arch. of Neur. and Psychiat., April, 1926.) Brynes, C. M.

Brynes finds in the neuro-muscular bundle a constant lesion characterized by œdema, early degeneration of the intrafusal nerve and final disintegration of the entire muscle spindle. The intramuscular nerve-trunks are normal, and the surrounding musculature is, as a rule, unaltered. The lesion in the neuro-muscular bundle is therefore essentially neuropathic, and involves a specific system of proprioceptive nerve-terminals. That the lesion is primary and not secondary to the tremor or the rigidity is indicated by the failure to discover any abnormality in eight spindles obtained from a case of the post-encephalitic Parkinsonian syndrome in which these symptoms had persisted throughout a period of five years. The author believes that the lesion is a toxic parenchymatous degeneration of the intrafusal nerve-terminals. The cause of the lesion is not known, but it is conceivable that one or more toxic substances of metabolic or glandular origin might exhibit a selective affinity for the neuromuscular bundle, and the early ædematous change in the spindle suggests an irritant chemical action or osmotic process.

It is generally taught that the muscle-spindle is an organ of muscle-sense, but apparently disease of the neuro-muscular bundle causes no appreciable abnormality in the perception of this sense. It is therefore reasonable to conclude that the spindle does not subserve this function. There is, however, much evidence that it plays an essential part in the mechanism of muscle-tone, and the author believes that the spindle is the afferent inhibitor of the striothalmic tonectic centres. Hypertonia of the Parkinsonian type might originate, therefore, from either central or peripheral disease of this system of fibres. Brynes suggests that the central lesion finds its chief exponent in the post-encephalitic syndrome, while genuine paralysis agitans, in its typical form, is characteristic of the peripheral lesion. Possibly in some cases there may be a combination G. W. T. H. FLEMING. of the two lesions.

# 6. Sociology.

After-Care Work with Mental Patients from the Point of View of a Psychiatric Social Worker. (Ment. Hyg., July, 1924.) Gegenheimer, Ruth A.

All the State hospitals of America have organized social service departments.

This service is under the supervision of the hospital superintendent, who is responsible to the State Department of Mental Diseases through the director of social work in that department. The law sanctions a probationary period of one year before the patient's name is discharged from the hospital books; this period enables the social worker to guard against a recurrence of the disease, and allows the patient to become socially and economically adjusted.

Those patients are selected whose supervision is specially required or whose problems are known to the social worker.

At first the social worker was looked upon as a hospital spy with ulterior motives, but public opinion has quickly changed and suspicion has been replaced by confidence. This change has been aided also by the establishment of evening clinics in all the large cities of the hospital district, and probationary patients are invited by letter and advertisement to attend these clinics, where the social worker also attends to pick up additional cases. The after-care department, with the clinic, interprets the hospital and its work to the community, the friends, relatives, and employers, and thus renders valuable assistance in the patient's readjustment.

The alcoholic manic-depressive and dementia præcox psychoses were the leading types of mental disorder in those visited. Many patients with dementia præcox made fair recoveries, and were able to live in the community.

A few illustrated life-histories of probationary patients are given with the method adopted for their social readjustment.

H. DE M. ALEXANDER.

The Rôle of Conferences with Relatives in the Educational Program of a State Psychopathic Hospital. (Ment. Hyg., October, 1925.) Ebaugh, Franklin G.

Conferences were held with patients' relatives on visiting days. These talks concerned the ætiology of mental disorders; the development of the psychopathic hospital movement; the classification of the patients in different wards and the routine of the hospital work; patients' clothing and contraband; forcible feeding, hydrotherapy, and occupational therapy; the anatomy and physiology of the nervous system; and the work of the social worker.

These conferences were well attended; the relatives became more sympathetic with, and appreciative of, the hospital staff, and realized the problems involved in caring for mental patients. Since the institution of these conferences complaints regarding the treatment of patients have practically ceased.

H. DE M. ALEXANDER.

Personality Deviations and their Relation to the Home. (Ment. Hyg., October, 1925.) Foster, Sybil.

The home environment of the child has tremendous power, both constructive and destructive. The writer illustrates various deviations of personality and conduct produced by doting parents and interfering relatives.

H. DE M. ALEXANDER.

The Case for the Mentally Retarded. (Ment. Hyg., October, 1925.)

Berry, Charles Scott.

School officials feel that the purpose of forming special classes for the mentally handicapped is to get them out of the regular grades, where they hinder the progress of the normal child. They do not object to the special classes for the blind or deaf, who are more of a handicap in the class of the normal child, and the education of the blind or deaf costs more than that of the mentally retarded. The real reason for the attitude of the school official is that he has grave doubts whether the mentally retarded child is worth educating, because he asserts that the mentally retarded child tends to delinquency, his intelligence quotient remains constant or decreases.

The answer to these assertions is that the most serious retarded mentally do not furnish as large a percentage of delinquents as those of less mental retardation. It is true that we have a long way to go before we shall be able to develop into law-abiding, self-supporting citizens 80% of the mentally retarded. We will never succeed until we get the child at an earlier age in his home through the agency of the teacher, social worker, and the nurse. Wrong feeding, insufficient clothing, preventable disease and improper training create mischief years before the child enters school. As to the question of propagation, the author would have the mentally retarded who have been trained to support themselves instructed in birth control.

H. DE M. ALEXANDER.

The Intelligence of Criminals. (Lancet, August 7, 1926.) Grierson, H. A., and Rixon, C. H. L.

From the wealth of material available at Brixton Prison, the authors present an analysis of the intelligence of 200 male offenders. The cases were not selected, none of them having been specially remanded for mental examination. No case, however, of a prisoner of more than 35 years of age was included, for the authors, in common with other workers, find that there are practical difficulties in the formal "mental testing" of persons over that age. group tested is fairly claimed to represent a small sample of what may be termed the "ordinary prisoner." The scheme of tests employed was the Terman scale. The mental ages ranged from 5-6 years up to 19½ years, the average being exactly 14 years. The investigation indicates that there has been great exaggeration in certain estimates which have been given as regards the alleged low average intelligence of offenders. For the authors point out that the average mental age of the whole population of this country is probably not higher than 14 years, and may, indeed, be lower. This conclusion is supported by the results of the psychological testing carried out in the American army. A striking correlation was found between the results on the whole scheme of tests and those given by the "vocabulary test" alone, the average mental age as found by this latter test being also exactly 14 years. It would be of interest to know whether the same result would be found in the testing of a similar group taken from an agricultural district, for it has been suggested that city dwellers tend to grade higher on this particular test.

The figures have been subdivided into groups, in connection with the various kinds of offences with which the prisoners were charged. The numbers in these groups are too small to justify

any sweeping conclusions. But it is of interest to note that the group charged with fraud and false pretences graded highest (average mental age  $15\frac{9}{12}$  years), while the group charged with rape and other sex offences graded lowest (average mental age  $12\frac{4}{12}$  years).

It is unfortunate that the urgent routine duties incumbent upon prison medical officers allow so little time for work such as this. The investigation is worthy of pursuit on a more extended scale. It should be accompanied, and checked, by an investigation into the intelligence of the entire population of the country. This latter task might well be undertaken by the Medical Research Council.

M. Hamblin Smith.

### 7. Mental Hospital Reports, etc.

ENGLAND.

Birmingham City: 1. WINSON GREEN.—The number of patients in this hospital and its branches (Stetchford Hall and Glenthorne) at the end of the year 1925 was 743 (males 368, females 375), nine more than at the commencement, all of them belonging to either the Birmingham or West Bromwich Unions, with the exception of a number of service and private patients. The direct admissions for the year numbered 219 (males 87, females 132), of which 89% of the men and 84% of the women were first-attack cases. Of the ætiological factors it is noticeable that in practically 15% of the admissions alcohol was assigned as a cause; one case was attributed to encephalitis lethargica and one to lead-poisoning. The chief forms of mental disorder amongst the admissions were melancholia, confusional insanity and delusional insanity; 12% of the admissions were diagnosed as primary dementia and general paralysis accounted for 6.8%.

The recovery-rate was the high one of 45.6% on the direct admissions, and on the recovery-rate in their hospitals the Committee make the following comment:

"The Committee have recently adopted the curative treatment of patients on the most modern lines, and for this purpose have appointed visiting specialists in gynæcology and ear, nose and throat diseases. They are satisfied with the results that have been obtained by the adoption of this treatment and that economy has been effected thereby, inasmuch as there has been a definite rise in the recovery-rate, and the total readmission rate has been reduced."

The death-rate for the year was 7.7, the lowest death-rate recorded in this hospital since the year 1851.

Dr. C. B. Roscrow has continued the treatment of certain cases of general paralysis by the induction of malaria.

"The treatment of general paralysis with induced malaria was continued from the year previous, and 7 patients were so treated with a certain amount of mental and physical benefit. The improvement that resulted in the cases that were treated at the end of 1924 was more or less maintained, but none had recovered from the disease at the end of twelve months."

It is gratifying to note that 72% of the male and 55% of the female nursing staff are fully qualified with the Royal Medico-Psychological nursing certificate—a position which reflects great credit on the medical officers and nursing tutors.

With regret we have to record that this is Dr. Roscrow's final report, and that he is compelled to relinquish his office owing to ill-health after twenty-three years' service of a high quality, fully recognized by the Committee in their report, and it is to be hoped that freedom from the cares of office will in some measure restore his health, that he may enjoy for many years his well-earned leisure.

2. Rubery Hill and Hollymoor.—The total number of patients in this hospital at the end of the year 1925 was 1,452, being nine more than at the beginning, but in addition to this 239 patients were boarded out at Barnsley Hall and Powick Mental Hospitals. The admissions for the year 1925 were 316 (males 152, females 164), of which 258 were direct—considerably less than those of the previous two years, the difference being entirely due to the reduction in female admissions. The largest number of direct admissions occurred in the age-period of 25-54.

"A little less than one-third of the total had been recognized as showing mental symptoms for over three months before steps were taken to secure treatment. This proportion seems to be an annual one. Careful investigation, however, generally reveals the presence of symptoms occurring much earlier than the period given as the time of onset. Inquiry into bodily conditions and investigations intothe bodily state commonly shows the existence of chronic disease processes of long duration, in some cases going back to childhood. These processes have sapped the resistance of the individuals and lowered their vitality.

Of the forms of mental disease amongst the direct admissions the largest figure is under the heading "primary dementia," namely, practically 21%. 22 cases of general paralysis and 30 cases of confusional psychosis were admitted during the year.

Heredity (psychotic, neurotic, epileptic or alcoholic) was traceable as an operative factor in causation in nearly 40% of the admissions, and alcohol as a principal factor was assigned in only 1.5% of the cases.

Concerning the ætiology generally Dr. T. C. Graves says:

"Any given attack being the resultant of the operation of many forces occurring in individuals with either a primary narrow margin of safety or whose margin of safety has been reduced by disease. Emotional stresses, which, in a healthy individual, produce a physiological response, in such individuals produce a pathological type of reaction.

"External or environmental stresses are of less importance than sources of

internal stress or bodily irritation or disease.

"In a considerable proportion of cases no history of emotional stress—certainly not adequate to cause the condition alone—could be elicited. What may superficially appear to be a causative factor of this character is on further inquiry frequently found to be an early symptom of the later cataclysm."

The recovery-rate for the year was 39%, and Dr. Graves draws attention to the difficulties involved in the different uses of the word " recovery."

"A larger number have been discharged under the heading of 'relieved' than in previous years owing to the higher standard being placed on the meaning of the term 'recovered.' The category of relieved also includes cases who have physical and nervous disabilities which prevent them being regarded as effective units, but who were well enough to be cared for at home by relatives as regards their mental state."

Treatment of general paralysis by malaria-induction has been carried out in all cases with the exception of those quite hopeless on admission, some alleviation of symptoms has occurred in many cases, and in two male cases "as far as present reports would indicate" useful recoveries have been effected.

The laboratory under Dr. F. A. Pickworth had rendered valuable assistance in investigating the nature and extent of the toxi-infective processes in patients.

Forty-three male and 42 female nurses hold the Royal Medico-Psychological Association's certificate, and 53 members of the nursing staff are on the Register of Mental Nurses of the General Nursing Council, and 2 matrons on the Register of General Nurses.

Brighton County Borough.—Dr. Harper-Smith commenced the year 1925 with 821 patients and ended with 828, in each case the female patients being considerably the larger number. There were 214 cases admitted during the year, and the chief forms of mental disease in these were recent mania and melancholia, there being only 5 cases of general paralysis and 4 of primary dementia. The recovery-rate for the year was 46.2%.

Of the nursing staff, 43 hold the Royal Medico-Psychological certificate and 24 have passed the preliminary examination.

Dr. Harper-Smith is hoping at an early date to establish an outpatient clinic in Brighton in connection with the general hospital.

Cheshire County: MACCLESFIELD.—There were 237 admissions during the year 1925 (94 males, 143 females), and in 113 of these Dr. Dove Cormac regarded the prognosis as favourable. 15 of the patients admitted were suffering from general paralysis, 16 from dementia præcox, 26 from chronic delusional insanity and 36 from senile dementia.

The recovery-rate for the year was 31%, and the death-rate 5.6, being the lowest recorded for 25 years. The total number of patients on the register at the end of the year was 1,325.

The chief causes of death were general paralysis, arterio-sclerosis and Bright's disease; tuberculosis was the cause in 5 cases.

General paralysis was treated with malarial inoculation in 18 cases, and of these 2 improved sufficiently to be discharged, and there was some improvement in 7 other cases.

Dr. Dove Cormac has treated 50 selected cases with ultra-violet rays, and has noted a marked general increase in weight, improved appetite and general exhilaration and cheerfulness. In manic-depressive cases the depression period appeared to be curtailed, delusional cases showed some improvement, dementia præcox showed but little change, and the treatment appeared to be contra-indicated in cases of melancholia with agitation and in hyperthyroidism. Although the work is still in the experimental stage, Dr. Cormac considers that ultra-violet radiation promises to be a useful addition to treatment in mental cases.

A short rėsumė is given of the clinical and pathological work carried out at this hospital, which includes some observations on the blood-pressure in cases of mental disease, some experiments in connection with radiant heat-baths, which seem to show a marked delay in the onset of sudoriferous activity in cases of dementia præcox, investigations as to the value of ovarian and orchitic extracts in mental disease, and observations on the circulation in cases of primary dementia, together with a large amount of routine laboratory work.

Hertfordshire County.—This hospital contained 904 patients at the end of the year 1925—seven more than at the beginning. There were admitted during the year 148 patients, of whom 137 were direct admissions, and of these 86 were first-attack cases, in which heredity to insanity was traceable in 26%, and alcohol was regarded as a principal cause in about 6%.

The recovery-rate for the year was 40.8%, as compared with 33.8% for the previous year, and 33.1%, the average for the past 25 years.

The dental surgeon treated 123 cases during the year, and a considerable amount of major surgery was performed.

St. Audry's Hospital, Suffolk.—In its Eighty-eighth Annual Report this hospital records an increase of 30 patients in the year 1925, making a total of 983 patients, the average increase for the past five years being 25.6.

During the year 184 patients were admitted, and in the interesting table shown by Dr. Brooks Keith, giving the areas whence these admissions came, there appears some very noteworthy variations. Of the forms of mental disease in the admissions recent melancholia takes the first place, closely followed by primary dementia (15%) and recent mania. Alcohol is assigned as a principal factor in causation in only 1% of the admissions. The death-rate was 5.5%, which, as in many similar institutions in the same year, was the lowest recorded for the hospital.

Both the Board of Control and Committee in their report, and Dr. Keith, have much to say as to the urgent necessity for providing further accommodation at the hospital for the increasing number of patients, which is at present provisionally met by the release of beds by building a nurses' home, and the boarding-out under sec. 26 (L.A. 1890). It is clear that such a step will require early consideration, since it is obvious that extension must also include enlargement of the central administration area to keep pace with the increase of work involved.

The hospital has sustained a considerable loss in the compulsory retirement, through ill-health and early death, of Mr. Gaffney, the Clerk and Steward, who had given faithful and devoted service to the hospital for nearly thirty years.

Metropolitan Asylums Board.—The duties of this Board are manifold and complex, one of them being the provision and management of institutions for mental defectives and epileptics, and in order to

carry out these duties it now possesses four mental hospitals, one training colony for improvable imbeciles, mental defectives and feeble-minded, and one colony for sane epileptics. Although originally designed only to provide for the needs of London, seeing that some part of the provided accommodation is aggregated to constitute the "Metropolitan Asylums Board Certified Institution," it now, in fact, is able to receive defective patients from all parts of England under the provisions of the Mental Deficiency Act of 1913, provided only that they have not been found guilty of any crimes of violence, and are not moral imbeciles within the definition of that act, though it is admittedly difficult in practice in all cases to carry out this exclusion. Cases of mental abnormality occurring as a sequel to encephalitis lethargica are specially treated in a separate department of the Northern Convalescent Hospital, Winchmore Hill.

Dr. Kinnier Wilson's report on this unit contains many interesting and valuable points:

"The sequelæ of epidemic encephalitis are as diverse as the phenomena of the disease itself; hence the clinical material of the unit is, and is always likely to be, particularly heterogeneous. It ranges from merely paretic or physically handicapped juveniles, of normal intellect and of good behaviour and control, to so-called 'normal imbeciles' (an unsatisfactory term) whose cunning and deceitfulness are linked to a certain degree of lowering of the intellectual level and who are potential young criminals. All are united solely by the slender thread of a previous attack of encephalitis. It will be a matter of investigation to what extent these behaviouristic defects and apparent changes in personality are, in actual fact, the outcome of the brain disease, and how far, if at all, other factors than it are responsible. Some relative segregation within the unit may become necessary in the case of juveniles of this class whose influence on others, not necessarily younger than themselves, may be detrimental."

There are many interesting and valuable scientific papers appended to the Board's report by its medical staff which it would be impossible to extract here, but special attention may be drawn to one by Dr. E. B. Sherlock, in which he discusses in some detail problems of heredity, devitalization of the germ-plasm and mutation in relation to a case of "four-toed foot." Other interesting articles are by Dr. J. Nicoll on "Unusual and Abnormal Mental States" and Dr. Park Inglis on "Pituitary Dwarfism." The total number of cases in mental institutions belonging to the Board on December 31, 1925, was 9,352.

Monmouth County.—This hospital ended the year 1925 with 1,164 patients in residence, as compared with 1,141 at the commencement of the year; in each case the male figures preponderated. There were 192 admissions during the year and the majority of these were cases of mania or melancholia, and Dr. N. R. Phillips records that of the 171 direct admissions (excluding congenital cases), insanity had existed for more than twelve months prior to certification in 25 cases, and from three to ten years in 7 cases; 35 were over 60 years of age on admission, 13 being over 70 and 1 over 80; 59 suffered from forms of insanity in which there was little hope of recovery.

The death-rate for the year was 6.4%, 17.3% of the deaths being due to general paralysis and 2.6% to tuberculosis.

As to causation, hereditary predisposition was found to exist in 31%, syphilis was assigned as a cause in 13 cases and intemperance in drink in 7.

Dr. Phillips recognizes the value of the dental department to the hospital, which, under Dr. Graham White, has done good work during the year.

The average cost per head for the year was 19s. 2.71d.

Salop County.—During the year 1925, 141 patients were admitted, 65 discharged and 43 died, with the result that the hospital had an increase of 33 upon the number resident at the beginning of the year. The total patient population on January 1, 1926, was 809, and Dr. W. S. Hughes publishes a table showing that the number of pauper patients in the hospital has increased since the dissolution with Montgomery in 1912 by 28.

The recovery-rate for the year was 35.8%, and the death-rate 5.4%, being the lowest recorded since the opening of the hospital, and senile decay and arterio-sclerosis were the chief causes of death; 11.6% of the deaths were due to phthisis pulmonalis.

With the consent of the relatives nearly all the cases of general paralysis were treated with malaria induction, but the results are still uncertain.

Suitable juvenile cases of an educable nature were not retained in the hospital, but were transferred to mental deficiency institutions.

The cost of maintenance was 15s.  $4\frac{1}{4}d$ ., the decrease of 1s.  $6\frac{1}{4}d$ . on the previous year being attributed to the increase of the average number resident, a slight fall in prices generally, and the substitution of home-generated electricity for purchased gas.

"In the latter connection it is of interest to note that in the year 1923-24—the year 1924-25 was one of transition—the sum of £3,539 was expended on coal, slack and gas, and for the last year the cost of these commodities was £2,365, showing a reduction of £1,174. Against this should be set off a sum of £750, representing interest on capital expended on, and depreciation of, plant, and as labour and other charges were approximately equal, a saving of £424 per annum is shown—apart from any reduced expenditure on the redecoration of the wards—with a much more efficient lighting and heating service than formerly."

Staffordshire County.: 1. STAFFORD.—The net increase of patients on the year 1925 was 9, making a total population at the end of the year of 961 (males 463, females 498), the average annual increase for the previous five years being 40. The total admissions for the year were 73 males and 106 females—179—and of these 132 were first-attack cases, 32 recurrences and re-admissions, and 9 cases of congenital defect.

Dr. B. H. Shaw gives a further analysis of these first-attack cases:

" First attack cases:							M.	F.
"(1) Mental breakdor	wn du	e to d	or asse	ciate	d wit	h		
(a) Cardiovascula	ır deg	enera	tion				9	13
(b) General paral	ysis						7	
(c) Epilepsy .	•						4	7
(d) Influenza.							3	_
(e) Alcohol .							5	_
(f) Heredity .							24	18
"(2) Mental breakdor	vn du	e to v	rariou	s othe	er cau	ses	8	34

"Excluding cases of breakdown due to cardio-vascular degeneration, general paralysis and epilepsy, possible recovery could be hoped for only in 92 of the first-attack cases, viz., 40 men and 52 women. Hereditary predisposition was ascertained in 31-8% of the first-attack cases.

"It is of interest to note that alcoholism is not now nearly so potent as an ætiological factor in the production of mental disorder as it was in past years. Of 634 first-attack cases admitted prior to 1914, its evidence as a contributory cause was 19% as compared with only 4% in 837 similar cases admitted since 1920."

The recovery-rate on the total direct admissions was 38% for men and 39% for women, and the maximum recovery-rate was in the case of men at the age-period 45-64, and in that of women 35-44. 55% of the recoveries during the past three years were admitted within two weeks of the reputed onset of the mental illness. During the past six years only 16% of the total recoveries have been readmitted.

The death-rate for the year was 6.36%, the principal causes being pulmonary tuberculosis, general paralysis and cardio-vascular degeneration.

"The mortality from pulmonary tuberculosis, which is equivalent to a rate of 12·38 per 1,000 resident, should not be considered in conjunction with the entirely fortuitous figure for 1924 of 2·15, as most of these patients were in an advanced tuberculous condition in that year, in addition to which two cases were, on admission, suffering from the disease in its terminal stage. Thus, taking the biennial figure per 1,000 resident since and including 1920, a steady reduction in mortality is shown. The figures are—

		0						
For 1920-21		•	•	•	•	•	•	16.9
For 1922-23		•	•		•	•	•	13.4
For 1024-25	_				_		_	7.26

"A comparison with the pre-war average of 36.37 per 1,000 resident is sufficient to show that our efforts in the promotion of efficient hygienic ward conditions are being steadily rewarded. The absence of suitable isolation blocks for these cases is, however, a great drawback."

Dr. Shaw reviews at some length the admission- and recoveryrate of the pre- and post-war periods, and concludes that the rapid increase in numbers resident since 1920 is entirely due to the greatly diminished death-rate, and foreshadows the necessity for increase in accommodation at an early date—a subject that is at present under the serious consideration of the Committee.

Amongst other interesting points in this report is the pleasing record that Mr. Napier, the laboratory assistant, has been awarded the Senior Greenfield Prize open to all laboratory assistants in Great Britain, and the installation of a mercury vapour lamp for ultra-violet treatment.

2. Burntwood.—This institution ended the year 1925 with 7 more patients than at the beginning, namely 914. There were

admitted during the year 197 cases (males 103, females 94). The recovery-rate for the year was 41.8 and the death-rate 7.6.

"At one time there used to be more numerous alcoholic admissions, who, as a rule, recovered quickly. Partly as the result of greater sobriety, partly due to their being treated to recovery in other hospitals, these do not reach us, and the admissions of men are therefore of less recoverable type. Added to the natural increase of population, this accounts for our increased daily average number of men. The provision of further male accommodation whenever possible should always be kept in view."

Malaria treatment has been tried in cases of general paralysis, and 2 cases have shown some improvement, but Dr. W. Reid cautiously adds the "time has been too short to show whether they are to progress to recovery."

The pathological laboratory has done good work during the year, and Dr. G. F. Cobb is publishing at an early date two prolonged investigations on the subject of acidosis and its relation to epilepsy.

3. CHEDDLETON.—The net increase of patients for the year 1925 was 20, making a total number of patients resident at the end of the year of 1,123 (males 621, females 502). Of the 229 admissions during the year Dr. W. F. Menzies was only able to give a possibly favourable prognosis in about 36% of the male and 34% of the female cases, and he shows how these figures must be a governing factor in estimating the most suitable size for an acute hospital for the area.

Dr. Menzies has much to say of the gravity, from all points of view, of continual overcrowding—

"But whether it be for mental deficients or for adult psychotics, some authority will have to face expenditure on bricks and mortar. I estimate that a colony of 1,500 beds would be none too large to supply the mental deficiency needs of the geographical area. It does not appear probable that certain authorities will, in the near future, withdraw their opposition to a combined scheme. This is a matter for the rate-payers, but I may say that two colonies of half the size will cost about half as much again in overhead administrative expenses, and the classification will suffer. Expenditure on mental defectives is not only on living quarters, but on shops, classrooms, industrial machinery, teachers and technical tradesmen instructors. All these, with the higher administrative officials, will be needed in two colonies as in one; the only saving will be in the number of less technically efficient junior staff. Were a large colony started now we could do without a detached hospital for some years, but if not then the sooner one is started at each of the three institutions the sooner will the insane of the county receive adequate treatment. Overcrowding is bad for the health of the patients, expensive in the fight against communicable infections, trying to the tempers of patients and staff alike, and ultimately expensive to the public owing to the small but certain percentage who each year should have recovered, but remain chronic for life."

Ten patients in all were admitted as the result of encephalitis lethargica, of whom 2 male adults with purely mental symptoms improved and were discharged. All the Parkinsonian type cases became steadily worse.

Inoculation of malaria was used in 8 cases of general paralysis, of which 2 improved, 3 have not altered, and in 3 cases sufficient time for observation has not elapsed.

Dr. Menzies goes into some detail as to his development of a system of education for the lowest grade of mentally defective children, and describes the difficulties to be met with in both the mental and orthopædic nursing of them, but the general result of this work appears encouraging and entirely praiseworthy.

Worcestershire: Barnsley Hall.—During the year 1925, 143 (males 60, females 83) patients were admitted, of whom 125 were direct admissions; the recovery-rate was 22% and the death-rate 6.4, 654 patients being on the hospital register at the end of the year, as against 718 at the commencement of the year, this fall in numbers being mainly due to an alteration in the contract with the City of Birmingham, by which 100 less patients belonging to it are maintained in this hospital.

Dr. Percy Hughes is able to record with satisfaction that no case of dysentery has occurred on the female side of the hospital since 1918, and none on the male side since 1914, and this in spite of overcrowding.

The average weekly cost of maintenance was 21s.  $4\frac{3}{8}d$ ., an increase of  $5\frac{3}{8}d$ . on the previous year largely accounted for by the loss due to the occurrence of swine fever.

### SCOTLAND.

Aberdeen City (Kingseat).—Dr. Alexander makes an appeal to his District Board of Control not to let the loss of the small Government grant (about 2s. per week) allowed for each certified case interfere with the reception of voluntary cases. He says:

"I would ask the Parish Council to relinquish this claim in favour of the few patients who could, to their benefit, be admitted here on a voluntary basis. The patients who can be admitted as voluntary boarders have some insight into their condition, and usually suffer from some form of emotional depression which a short course of treatment in the hospital would in most cases dissipate, but as matters stand at present in Aberdeen the illness of these patients is allowed to proceed until their symptoms necessitate certification. Were they able to afford it they could enter a private hospital as voluntary boarders at once."

We can endorse this heartily, and also point out that the present policy is penny wise but pound foolish, for the earlier that treatment commences the greater the prospects of recovery, and the less likely is the need for certification and perhaps prolonged and

costly detention as a chronic patient.

A propos of this, Table IX, which shows the history of the annual admissions since 1904, with the discharges and deaths, and the number remaining each year on December 31, is very illuminating. Of the 113 cases admitted during 1925, 67 remained at the end of the year, so 46 had then already either died or left hospital, the actual demission being 24 recovered, 7 relieved and 15 died. Now the totals of the patients disposed of during the year were 43 recovered, 15 relieved, 3 not improved and 43 died. Of those who recovered in 1925, the years of their admission were 24 in 1925, 9 in 1924, 4 in 1923, 2 in 1922, and 1 each in 1921-19 inclusive and also a solitary case in 1914. This table shows, whether the figures for 1925 or any of the previous years be used as a basis, that patients on admission have a 5 to 1 chance of

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recovery during their first year and practically a nil chance after their third year of treatment. So the sooner that first year's treatment is commenced the better. Nothing, therefore, should stand in the way of skilled treatment when mental disorder has declared itself.

Among the causes of death is perforation of the stomach by swallowing a tooth-brush.

Dr. Alexander deplores the restlessness and lack of responsibility of junior nurses in these days as compared with those of a few years ago. It is to be feared that this is equally true in regard to the majority of occupations, the cause being difficult to define, but probably lessened parental control and home training has a good deal to do with it. Dr. Alexander is looking forward with satisfaction to his new villas being opened this year, which will facilitate classification, relieve overcrowding, and conduce to more contentment and less turbulence among his patients.

The Commissioners report that the hospital administration is handicapped by the presence of a number of mental defectives who are undoubtedly best segregated in a separate institution when detention is needed.

Aberdeen Royal.—There remained on the general register of this institution at the end of the year 815 patients as compared with 800 at the beginning, and 180 patients were admitted during the year (males 90, females 90). Of the admissions, 69 suffered from manic-depressive insanity, 39 from dementia præcox, and 29 from infection-exhaustion psychosis. Concerning the admissions and their ætiology Dr. Dods Brown makes the following remarks:

"Too many patients were not sent for institutional treatment sufficiently early, and a large proportion of them should have been certified sooner. In a certain number this procedure would doubtless have presented some difficulty, but they could have been advised to seek admission as voluntary patients. Statistics show clearly that the deferring of proper treatment militates against recovery. Much can be done by the relatives and medical advisers to overcome the reluctance of patients to enter a mental hospital. It is much more creditable to do everything that is possible to persuade a person to undergo treatment than to leave the matter alone when it is known that by doing so his chances of recovery are becoming more and more unfavourable.

"It is often difficult or impossible to obtain from the relatives an accurate account of the patient's condition before admission, either through want of knowledge or a disinclination to discuss it. In dealing with all cases it is advisable to enter fully into the personal history of the patient from an early age, and not merely to consider that obtaining within a few weeks or months of the illness. In this way only can a correct diagnosis and prognosis be come to and the proper treatment adopted. Some early psychical trauma, some long-continued irritation in the home or business environment may lay the foundation of an illness which starts later in life. What is given as the exciting cause of the disturbance is frequently either unimportant or is an early symptom for which treatment was not requested. Sleeplessness, constipation, intemperance, worry without sufficient cause, for example, may be mentioned as having been present for some time before the illness set in, but a thorough investigation then would have shown that other symptoms were present."

Dr. Dods Brown speaks highly of the value of occupational therapy, which has been developed with such success under the

skilled guidance of Miss Fulton, a graduate of the College of Occupational Therapy of Philadelphia.

Glasgow Royal.—During the year 1925 there were 138 admissions to this institution and 121 removals, of whom 51 recovered and 42 died, with the result that there were resident in the hospital 533 patients at the end as against 516 at the commencement of the year; 136 of the admissions were private cases.

Dr. D. K. Henderson makes some wise and interesting remarks on the loose, ill-digested *obiter dicta* so commonly expressed in the daily papers concerning mental disease:

"Not infrequently statements appear in the Press in regard to such topics as sterilization of all grades of people suffering from mental defect, and even of those who have at one time suffered from attacks of mental disorder. There are some who do not hesitate to say that the best and easiest method to deal with the whole group of the insane, the defective and the criminal, would be to exterminate them altogether. Superficially, such methods might seem to be an easy way out of a very grave difficulty, but in practice such a plan would be impossible. I am convinced that all such repressive measures undoubtedly would mean class legislation of the worst type, and, furthermore, it would be impossible to get medical men who had a due sense of honour to take the responsibility for advising such procedure. In any case, I do not believe that mental disorder or defect can be cured in any such way, because inevitably such a course would produce a lower moral attitude rather than a better race. The road is not easy; it may mean many years of painstaking work before we accomplish very much, but we should attempt to put matters on a higher plane, and by education, in the truest sense of the word, spread abroad a saner, healthier and more broadminded attitude."

Dr. Henderson urges a closer and more intimate study of personality as a basis of mental disease, and subscribes to the recent views expressed by Kretschmer, which appear to be more or less closely related to the two types described by Jung, and points out the importance of recognizing these types in their developmental period, more especially in the case of the high-grade defective, and those of highly-sensitive and poorly-balanced nervous systems.

The report of the occupational mistress is full of interest, and shows how encouraging is the effect of allowing the free expression of personality in crafts and arts.

Dr. Henderson is fortunate in having the support of a strong body of directors who, from the report of their annual meeting, are evidently keenly interested, and in having the assistance of a large number of assistant physicians and clinical clerks and a full consulting staff.

James Murray's Royal Asylum, Perth.—Dr. Chambers states in his ninety-ninth report that the admission-rate for 1925 was 84 (the highest recorded in the history of the hospital), and of these admissions 59'5 were on a voluntary basis.

He has little difficulty in inducing a voluntary boarder to remain

in the hospital as long as may be necessary or advisable.

In a considerable number of the admissions a septic condition of the mouth, throat and teeth was present; but the "severity of this septic condition bore no regular ratio to the severity of the mental symptoms, and, as in past years, the results obtained by energetic and even drastic treatment were frequently disappointing.

Rest in bed on verandahs has been intensified in this hospital during the past year by a regulated exposure of increasing areas of the uncovered body to the direct rays of the sun, and by the use of the ultra-violet rays produced by a mercury vapour lamp.

Every eligible nurse and attendant sat the examination for the

nursing certificate.

### NORTHERN IRELAND.

Down County.—During the year 1925, 110 patients were admitted, the male and female admissions being exactly equal in number. The total number of cases under care during the year was 830, and the number remaining on the books at the end of the year was 720, the males predominating.

Of the admissions, there were only 4 cases of general paralysis of the insane, 4 of epilepsy and 4 of primary dementia—the largest figure occurs under the heading "recent melancholia."

The recovery-rate was a high one, namely, 53% of the admissions,

which Dr. M. J. Nolan explains as follows:

"This high rate may be attributed to a very limited extent to the speedy return to equilibrium of storm-stressed minds which, unbalanced by purely psychical burdens, find themselves quickly stabilized when harboured in sheltered surroundings. But the vast majority of the patients admitted were those whose mental affection was the outstanding accompaniment of some abnormal organic or functional condition in structures other than the brain. Very many, if not most mental derangements arise from causes outside that organ. 'Search the body to find the disordered mind' is the slogan in the clinical investigation of insanity. The appended abstract from the Medical Journal shows that no less than 594 cases were under treatment during the year for various bodily ailments."

Of the admissions, heredity was ascertained in 29% of the cases, and in 3 cases masturbation and sexual excess were assigned as associated factors of the insanity; alcohol was only considered a principal factor in one case, and the puerperal state (not septic) was only responsible for a single case. The preponderating factor in causation appears to have been prolonged mental stress.

The Committee of Management have adopted certain regulations in connection with promotion of the nursing staff and the possession of the Royal Medico-Psychological Association Certificate, which Dr. Nolan finds have proved an excellent stimulus, and larger numbers are now presenting themselves for training and examination, to the great advantage of the hospital and its patients.

The dental department is now in full working order, and the tabular statement appended shows a considerable amount of valuable work done, 372 patients having been treated during the

The large number of exceedingly good photographic illustrations of the hospitals, both inside and out, adds interest to the report.

### Part IV.—Notes and News.

### THE ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION.

THE POSTFONED QUARTERLY MEETING summoned for May 18, 1926, was held at the British Medical Association House on Monday, July 12, 1926, Dr. J. Chambers, the Treasurer, in the Chair.

### MINUTES.

The minutes of the last quarterly meeting, having already appeared in the Journal, were taken as read and approved and signed by the Chairman.

### REPORT BY GENERAL SECRETARY.

The General Secretary reported that on June 1, 1926, the Council and various Standing Committees met and had transacted all the business which would have come up had the meeting been held in May. The Council had asked the President-Elect, the Treasurer, the General Secretary and Dr. F. H. Edwards to meet and examine the Bye-laws, and to consider what amendments were necessary to bring them to comply with the Charter and current practices of the Association. They were also given power to act in regard to a Coat-of-Arms and a new Seal.

He moved and Col. J. R. LORD seconded that the action taken by the Council be approved.

Agreed.

There being no further business, the meeting then terminated.

A SPECIAL MEETING of the Association was held at the British Medical Association House on Monday, July 12, 1926, Dr. J. Chambers in the Chair.

### REVISION OF THE BYE-LAWS.

On the motion of the President-Elect, seconded by the General Secretary, a Special Committee consisting of the President-Elect, the Treasurer, the General Secretary and Dr. F. H. Edwards was appointed to examine the Bye-laws and draft amendments necessary to bring them into conformity with the Charter and current procedure of the Association. This concluded the business for which the special meeting was summoned.

Members, at the request of the Chairman, remained to discuss with the members of the Special Committee the conclusion the latter had already come to on the matter referred to them.

Col. J. R. LORD then explained how these gentlemen, now properly appointed as a Special Committee, and their existence regularized, had met unofficially as requested by the Council of June 1. He went seriatim into the amendments it had been decided to recommend the Association to adopt. Several further amendments were suggested by the members present and adopted by those entrusted with the revision.

THE EIGHTY-FIFTH ANNUAL MEETING of the Association was held on Tuesday, Wednesday, Thursday and Friday, July 13-16, 1926, at the British Medical Association House, 19B, Tavistock Square, London, W.C. 1, under the Presidency of Lt.-Col. J. R. Lord, C.B.E., M.B., M.R.C.P.Edin.

The Council and the various Standing Committees assembled on the previous day.

### MORNING SESSION .- TUESDAY, JULY 13.

The proceedings opened with the business meeting, over which Dr. M. J. Nolan presided, and in taking the Chair explained that his presence as chairman was due to the sad loss the Association had sustained in the death of Sir Frederick Mott.

### MINUTES.

The minutes of the eighty-fourth annual meeting, held at Birmingham, having appeared in the Journal were taken as read, and were confirmed and signed by the Chairman.

### OBITUARY.

THE LATE SIR FREDERICK W. MOTT, K.B.E., LL.D., M.D., F.R.C.P., F.R.S., and Others.

The CHAIRMAN then referred to the unusually lengthy obituary list which had appeared in the Journal of Mental Science, among the names mentioned being those of Dr. Donald Fraser, Dr. R. J. Legge, Dr. J. E. P. Shera, Dr. J. C. Shaw, and Sir Frederick Mott, who, one year ago, it had been his proud privilege to induct into the presidential chair. Sir Frederick had been called with almost tragic suddenness, and not only the Association but the whole world of medico-psychological research was bereft of one of its most gifted, strenuous and original leaders. In view of such a recent bereavement it was difficult to give anything like adequate expression to the sense of loss and regret they all felt. It would be commonplace to sum up that loss as irreparable, yet that expression had rarely been used with greater truth. To those who were acquainted with Sir Frederick's work it was unnecessary to use the language of panegyric. The sad, simple, eternal fact of his decease had touched all their hearts, and they felt acutely that one of the most vital forces in the Association had been suspended when at the very zenith of its intensity. For the splendid mind had been unaffected by years, otherwise than by a higher development of its powers and by a widening and deepening of its scientific culture. The speaker had advisedly used the word "suspended," for though Sir Frederick was at rest, being one whose good fortune it was to "work out, not rust out," he survived and would continue to survive in his work, which had, in an unusually high degree, the rare combination of research and its practical bearing-in this case on the cause and treatment of mental disorder-and which, moreover, pointed clearly the way to be followed by other workers. Like Livingstone, Sir Frederick was a pioneer into dark and silent lands, and while, figuratively speaking, there could be but one Livingstone, there would be many Stanleys to follow. Dr. Nolan hoped he would be excused for making a personal reference. He had not infrequently met Sir Frederick when he joined the Association some thirty years ago. Contact with him had been an inspiration to anyone interested in the study of insanity; he encouraged confidence and was full of suggestion. Later the speaker and Sir Frederick had corresponded regarding a case of juvenile general paralysis which Dr. Nolan had recorded—such cases being then comparatively rarely recognized. Later still, when, like many others of his colleagues, he had taken exception to the title "asylum dysentery"-because of the fact that cases of dysentery were admitted to the institutions—correspondence had reopened. The speaker recognized fully the value of Sir Frederick's research in regard to that disease and the importance of his suggestions for minimizing its evils, suggestions Dr. Nolan had adopted with the greatest possible success. Finally, when as President of the Association he had invited Sir Frederick to take an active part in the proceedings of the Annual Meeting in Belfast, he had responded promptly and cordially, illuminating the discussions, as well as enriching the proceedings, by his original communications. Moreover, Sir Frederick had zealously availed himself of the opportunity to advance the propaganda of research, and the establishment of university teaching and examination in psychiatry, and sowed seed which there was every hope might bear fruit in Belfast. He could not forget the charm of Sir Frederick's personality, in social intercourse and close association, when he had revealed the modest simplicity of a great mind and a contented disposition. He remained in memory a master mind, enshrined in attributes which formed an attractive personality—magnetic mind power, exceeding gentleness and, above all, that honesty which a seeker after truth, such as he had been, must possess in an exceptional degree to make his work of the highest value. There were present at that meeting many who had worked for years in close association with Sir Frederick Mott, and who could express more eloquently, and with a more intensive knowledge, the just tribute of admiration and regret that was evoked by the memory of their late President-a tribute which was whole-heartedly tendered by that Association.

Dr. F. L. Golla said he had nothing to add to the admirable tribute the Chairman had paid to the work of the late Sir Frederick Mott. There was, however, a suggestion he would like to make. When such a man had completed his life's work, and that work was such that its value was recognized by the whole scientific world of Europe, it seemed invidious to be content with the mere immortality that Sir Frederick had secured for himself. There were two aspects of his life's work, one purely personal, for they all appreciated what a friend they had lost in Sir Frederick, and the other was in connection with what Sir Frederick had done to advance science. It was the duty of the Association to try and preserve so far as possible the memory of all those who had made some steps for scientific advance in psychological medicine. He did not mean the sort of thing that their Victorian ancestors delighted in, as typified by the monstrosities seen in Hyde Park in such erections as the Albert Memorial. There was a very pretty custom in Germany, France, Russia and America, whereby all those concerned contributed some of the work they had been inspired to do by their master, the whole thing being published. There were many from all nations who at one time or another had worked at Sir Frederick's laboratory, or in some way been associated with him in his work. Would it not be a delicate compliment, and a better way of perpetuating the memory of a great leader, if an attempt were made to collect together little fragments of appreciation, some little piece of work inspired by him, from those at home and abroad who had been his pupils or colleagues, and all these contributions put together, and possibly—he did not know what Col. Lord would think of the suggestion—published as a special number of the Journal of Mental Science, or as a separate publication? Such would constitute a memorial that would have pleased Sir Frederick Mott far more than any other.

On the motion of the Chairman, resolutions of sympathy were carried, by members rising in their places, to Lady Mott and her daughters in their great loss, and to the relations of the other members he had mentioned as having died since the last quarterly meeting.

### ELECTION OF OFFICERS OF THE ASSOCIATION.

On the motion of the Chairman, the following were unanimously elected officers of the Association for 1926-27:

President.-J. R. Lord, C.B.E., M.B., M.R.C.P.Edin.

Treasurer. - James Chambers, M.A., M.D.

Editors of Journal.—J. R. Lord, C.B.E., M.B., M.R.C.P.Edin., H. Devine, O.B.E., M.D., F.R.C.P., G. Douglas McRae, M.D., F.R.C.P.Edin.

General Secretary.-R. Worth, O.B.E., M.B.

Registrar. - Daniel F. Rambaut, M.A., M.D.

### The President-Elect.

[Had the President occupied the Chair, it would have been his pleasant duty in accordance with precedent to have announced the name of Dr. Hamilton C. Marr, a Commissioner of the General Board of Control for Scotland, as President-Elect for the coming year.]

### Nominated Members of the Council.

The Chairman then proposed that the nominated members of the Council be: Drs. Thomas Beaton, H. B. Leech, Hamilton C. Marr, G. M. Robertson, G. W. Shore and R. Percy Smith.

### ELECTION OF HONORARY MEMBERS.

On the proposition of the Chairman, the following gentlemen, whose names had been approved of by the Council, were elected Honorary Members:

Prof. C. WINKLER, M.D., of Utrecht, Holland.

Dr. Adolf Meyer, of Baltimore, U.S.A.

Proposed by Drs. W. Buchanan, Chambers, Lt.-Col. J. R. Lord and Drs. J. G. Soutar, and R. Worth.

### APPOINTMENT OF HONORARY AUDITORS.

C. F. D. McDowall, M.D., and H. J. Norman, M.B., were appointed the Honorary Auditors for the current year.

### APPOINTMENT OF STANDING COMMITTEES.

The Standing Committees were re-elected as follows: Parliamentary Committee with the addition of Drs. E. Mapother, Porter Phillips, G. W. B. James and J. Carswell; the Educational Committee with the addition of Dr. H. Dove Cormac; the Library Committee with the addition of Dr. J. R. Whitwell. Dr. M. A. Collins retired from the Parliamentary and Library Committees.

### Special Committee on Post-Graduate Teaching, etc.

Col. J. R. Lord moved that this committee be discharged. He said its reference had, in the revised bye-laws, been added to that of the Educational Committee, and would be undertaken by a sub-committee of that Committee.

Dr. M. A. Collins seconded.

The proposition was agreed to and the Special Committee thanked and discharged accordingly.

### REPORTS.

The GENERAL SECRETARY read, and moved the adoption of the Report of the Council, as follows:

The number of members—Ordinary, Honorary and Corresponding—as shown in the list of names published in the *Journal of Mental Science* for January, 1926, was 748, as compared with 739 in 1925.

Number of new members elected in 1925		•	44
Number of members recorded in 1925	•		1
Removed according to Bye-law 17 .	•		12
Number of members resigned in 1925.			10
Number of deaths in 1925			14

Members.		1916.	1917.	1918.	1919.	1920.	1921.	1923.	1923.	1924.	1925.
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With reference to the death of the late President, Sir Frederick Mott, the Council and Officers, and especially the Secretary of the Association, are very dependent on the President for help and advice during their term of office, and in the case of Sir Frederick Mott this was always freely and generously given, and nothing was too much trouble for him—busy man as he was. In his year of office great strides were made in the Association's welfare, and the help he gave did a great deal to forward this.

Since the last annual meeting was held, quarterly meetings have been held in London.

The year has been an eventful one. The offices of the Association, which for many years had been at No. 11, Chandos Street, were recently transferred to the British Medical Association House at 19B, Tavistock Square, London, W.C. For this the Council have to thank the British Medical Association—especially Sir R. A. Bolam, the chairman—for their kindly co-operation.

At the quarterly meeting held on November 17, 1925, at 11, Chandos Street, Drs. Brooks-Keith and R. Worth were chosen as representatives of the Association to confer with the Mental Hospitals Association, Clerks' and Stewards' Association and National Asylum Workers' Union in opposing the inclusion of the mental hospital employees in the Local Government and other Officers' Superannuation Act, 1922. In this connection many meetings were held during the year, and a Memorandum was prepared and evidence given by the General Secretary before the Departmental Committee on this matter on March 25, 1926. At the same quarterly meeting Dr. Carswell opened a discussion on "Insanity and Crime; Some Suggestions arising out of the Atkin Report."

# ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION.—For the Year 1925.

## REVENUE ACCOUNT-January 1st to December 31st, 1925.

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At the quarterly meeting held on February 16, 1926, at 198, Tavistock Square, Dr. Isabel Robertson read an interesting paper entitled "Blood and Vascular Conditions in Psychoses." Owing to the General Strike the May quarterly meeting had to be cancelled, but in accordance with the Bye-Laws a meeting of the Council, the Nominations Committee, and various other Standing Committees was held on June 1. At the Council meeting it was announced that the Charter had been granted to the Association, which previously had been given permission to use the prefix "Royal." An unofficial body was appointed, consisting of Dr. J. Chambers, Col. J. R. Lord, Dr. F. H. Edwards and Dr. R. Worth, to go into the matter of the revision of the Bye-Laws rendered necessary by the terms of the Charter and the question of the Seal and Coat of Arms, with power to act in the latter matters.

The Council desire to record their great appreciation of the work of the General Secretary, which, although at all times heavy, has been exceptionally so during the year under report.

R. Worth, Hon. General Secretary.

Col. J. R. Lord seconded, and made special reference to the zeal, efficiency and conscientiousness of the General Secretary. (Applause.)

The Report was unanimously adopted.

### REPORT OF THE TREASURER.

The Hon. TREASURER (Dr. James Chambers) then submitted the Revenue Accounts and Balance Sheet for the year 1925, together with a statement of income and expenditure in connection with the Maudsley Bequest and the Gaskell Fund, and moved their adoption.

Col. John Keay seconded.

The Report and Accounts were agreed to.

### REPORT OF THE EDITORS.

Col. J. R. LORD then presented the Editors' Report as follows:

The Editors beg to submit the usual table depicting an analysis of the cost of

the Journal for the year 1925 as compared with 1924.

It will be seen that the size of the Journal in pages has increased from 722 to 874, and also the number of illustrations. The October number was an unduly large one because it was felt that it would be to the convenience of members to have the proceedings of the annual meeting all in one number and the epitome section has been much enlarged. The enlargement of the Journal in regard to text and illustrations has cost the Association £152 175. 1d., amounting to 8½d. per Journal.

The sales show an increase of £45, and it had been necessary to increase the

quarterly issue by 25 copies.

The Editors have asked the Council to appoint a Special Committee to inquire as to the directions in which the Journal can be improved and more effectually carry out its functions as the organ of the Association, and they hope that such a committee will commence its labours during the present year. The inquiry has been postponed until the matter of the granting of a Royal Charter was completed.

The Editors regret that one of their number—Dr. Henry Devine—finds himself unable to take any further active part in the production of the Journal. Dr. Devine, since he joined the editorial staff, has undertaken the editorship of the section devoted to epitomes of current literature. He will not submit himself again for re-election.

In the meantime Dr. Thomas Beaton has taken over this part of Dr. Devine's editorial duties, and adhering to precedence, the Editors propose to appoint him Assistant Editor, which post does not carry with it a seat on the Council.

The Editors have reason to believe that the Journal continues to occupy a front rank position in the literature of the psychiatric world. For this they are grateful to the increasing number of authors who select its pages for the publication of original work, to the reviewers, who have dealt with 32 books, and to those assistants who have epitomized no less than 142 articles ranging over a wide field of psychiatric interests.

For the Editors, John R. LORD.

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In moving the adoption of the Report, Colonel Lord reminded the meeting that the desirability of the appointment of a Committee to consider the form in which the Journal of Mental Science was published and to see what improvement could be made in its management was discussed at the last annual meeting. Probably something would have been done in that direction during the past year, but it was felt that any recommendations made by such a Committee would depend a good deal on financial considerations, and it was then unknown as to how the finances of the Association would be affected by the Royal Charter for which a petition had been presented. That was why the question had been postponed. He felt that he need not again enlarge upon the necessity for this committee of inquiry into Journal matters, and later on he would move the motion which had been placed on the agenda in regard to that matter.

Cost to the Association of Journal per copy.

Cost of Journal to the Association .
Cost of Production of Journal per copy

Size of Journal in pages

Dr. R. H. COLE pointed out that the Association had elected Dr. Devine as one of the Editors, and asked if his name would be omitted if Dr. Beaton was elected Assistant Editor.

Colonel LORD explained the action proposed was in accordance with precedent. Dr. Devine would remain an Editor for the year in an advisory capacity. The appointment of Dr. Thomas Beaton as Assistant Editor would be made by the Editors, who were responsible for the management of the Journal. His promotion to the position of an Editor was a matter for a future annual meeting to decide.

Prof. G. M. ROBERTSON expressed the gratitude of members of the Association for the skilful way in which the Journal had been conducted during the past year. It had contained many interesting, important and informative articles, and he desired, on behalf of the ordinary members of the Association, to thank the Editors, especially the chief Editor, Colonel Lord, for the way in which the Journal had been conducted. He seconded the adoption of the Report. (Applause.)

Colonel Lord said he was grateful for Prof. Robertson's remarks. As far as he was concerned, it had always been a great pleasure, and of course a tremendous education, to have the privilege of editing the Journal, and he was sure he could associate his colleagues with those sentiments.

### SPECIAL COMMITTEE OF INQUIRY INTO JOURNAL MATTERS.

Colonel LORD said: As to the personnel of this committee, in the first place the Treasurer was necessary, because of the financial considerations involved. Then someone historically connected with the Journal was desirable. He suggested Dr. R. Percy Smith, who had the confidence of everybody. Next it was necessary to have someone who was in touch with psychiatric work, research and otherwise, of a very wide kind, and suggested Dr. F. L. Golla. The Journal was still the Journal of Mental Science for England, Scotland and Ireland, and the meeting should elect a representative of Scotland and of Ireland. As to Scotland, he would like to see Prof. G. M. Robertson join the committee, because he was in constant touch with the teaching of psychiatry. Would the Chairman (Dr. M. J. Nolan) join the Committee as representative of Ireland?

The CHAIRMAN replied that he thought Col. W. R. Dawson would be prepared

to. He had been an Editor in the past.

Colonel Lord then moved that the Committee be constituted as follows: The Editors, Dr. R. Percy Smith, Prof. G. M. Robertson, Dr. F. L. Golla, Lt.-Col. W. R. Dawson, with the President, the Treasurer, and the General Secretary as ex officio members.

Dr. G. D. McRAE seconded the proposition and it was carried.

### REPORT OF THE HONORARY AUDITORS.

On the motion of Dr. J. Chambers, seconded by Dr. Hamilton C. Marr, the Auditors' Report was adopted, as follows:

We, the undersigned, having examined the Treasurer's books, and having duly compared and scrutinized receipts and vouchers, hereby certify that the Accounts and Balance-Sheet, as set forth, represent a true statement of the Royal Medico-Psychological Association's finances for the year 1925.

COLIN McDowall Hubert F. NORMAN Hon. Auditors.

### REPORT OF THE EDUCATIONAL COMMITTEE.

On the motion of Col. John Keay, seconded by Dr. M. A. Collins, the Report of the Educational Committee was adopted, as follows:

The Educational Committee beg to submit the following report for the year ending July 12, 1926.

Four meetings have been held during the past twelve months.

A sub-committee has been appointed to report on the training and examination of those attending mental defectives. This matter is still under consideration.

The Medical Superintendent of the Provincial Mental Hospital, Alberta, Canada, has asked whether arrangements can be made for mental nurses in Alberta to be examined for the Certificate of the Association; the Educational Committee has decided that every assistance shall be given to him.

The number of candidates who presented themselves for the nursing examinations during the year was: Preliminary, 3,255; Final, 2,485. In the previous year the figures were: Preliminary, 3,471; Final, 2,641.

The Gaskell Medal and Prize for 1925 was awarded to Dr. Wm. S. Dawson, and special prizes were granted to the other competitors, Dr. W. Moodie and Dr. John Bostock.

The following regulation has been rescinded:

"An Institution to be recognized for the training of mental nurses must have a resident medical officer, this not being a necessity for the recognition of an institution for the training of those nursing mental defectives."

J. KEAY, Chairman. A. W. DANIEL, Secretary.

### REPORT OF THE REGISTRAR.

In the absence of the Registrar, Col. JOHN KEAY presented the Registrar's Report and moved its adoption [abstract]:

As reported at the quarterly meeting on June 1, 1926, the number of entrants for the May examination, exclusive of South African candidates, was: Preliminary examination: Nursing section, 2,101; mental defective section, 150. Total, 2,251.

Final examination: Nursing section, 1,555; Mental defective section, 60. Total, 1,615. Grand total, 3,866.

Great difficulty and delay were caused by the General Strike, but these were overcome, and I am glad to be able to report that the whole of the results of both the Preliminary and Final Examinations have been dispatched to the various institutions. At the annual meeting in July, 1925, I was only able to report that two-thirds of the results of the Preliminary Examination had been notified.

Of the 2,251 candidates for the Preliminary Examination in May, 1926, 1,393

have passed, being 61.88%.

Of the 1,615 candidates for the Final Examination, 977 have passed—60-49% of those who entered. Thirty-seven of the successful candidates in this examination passed with distinction—this being 2-29% of the entrants for the Final, and 3.78% of the successful candidates.

(Signed) D. RAMBAUT.

Dr. M. A. COLLINS seconded. The Report was unanimously adopted.

### REPORT OF THE PARLIAMENTARY COMMITTEE.

Dr. W. Brooks Keith then moved and Dr. R. H. Cole seconded the adoption of the Report of the Parliamentary Committee, as follows:

Since the last annual report was presented your Committee has met on four occasions.

The Bill to amend the Asylums Officers' Superannuation Act, 1909, which was drafted by representatives of the Association in collaboration with representatives of other interested bodies, was presented to Parliament on March 23, 1926, but was defeated on second reading, apparently on account of the fact that the whole question of the superannuation of Local Government Officers is at present under review by a Departmental Committee set up for the purpose. It is hoped that the Bill will be again introduced early next session. Your Committee, having brought to your notice the probability that the Departmental Committee would recommend that officers and servants of public mental hospitals should be included in the Local Government and Other Officers' Superannuation Act, 1922, it was resolved by the Association to oppose such a step. Representatives were appointed and have given evidence before the Departmental Committee, urging the claim of the public mental hospital services to be regarded as an excepted service for purposes of superannuation. Copies of the precis of this evidence have been printed and sent to all medical superintendents of public mental hospitals with a view to assisting them in laying the matter before their visiting committees.

The Nursing Homes (Registration) Bill has been considered, and an amendment has been suggested by your Committee to exclude institutions and houses covered by the Lunacy and Mental Deficiency Acts.

R. H. Cole, Chairman. W. Brooks Keith, Hon. Secretary.

The Report was unanimously adopted.

### REPORT OF THE LIBRARY COMMITTEE.

Dr. Colin McDowall moved and Dr. H. J. Norman seconded the adoption of the Report of the Library Committee, as follows:

During the year the Library of the Association has been worked under difficulties. The books have been removed from 11, Chandos Street, to the British Medical Association's House, Tavistock Square, and although it is possible that the accommodation there may be sufficient for the calls which are made upon it, the remoteness of the situation will, it is feared, tend to diminish the usefulness of the reference library. It has been possible, through the courtesy of the officials at Chandos Street, to still circulate the quarterly magazines, but some little time must pass before the Library is in working order again. However, any applications made for books will be dealt with as promptly as possible, and should there be any difficulty in procuring books they will be loaned from Lewis & Co. and forwarded as required.

The presentations and additions by purchase have been duly noted in the Journal from time to time.

We have with much regret to record the loss the Committee have sustained through the death of their Chairman, Dr. Henry Rayner, who for so many years worked with energy and enthusiasm in an attempt to make the Library of real use to the members of the Association. Dr. Hyslop has been appointed his successor.

T. B. Hyslop, Chairman.

COLIN McDowall, Secretary.

### REVISION OF THE BYE-LAWS.

Col. J. R. LORD then spoke of the work of the Special Committee appointed to revise the Bye-laws, and explained that it had become necessary after the granting of the Charter that the Bye-laws should be made to comply with the Charter, as the latter had superseded the former Articles of Association. Having regard to the fact that the new Bye-laws had to be made within six months of the granting of the Charter, or application for a postponement lodged with the Privy Council, there was no opportunity for the Association to undertake a detailed revision or extensive emendation. Moreover the Bye-laws could not be properly considered except by a Special Committee, and such a committee had to be appointed at a Special or Annual Meeting. The General Strike had rendered it impossible for a special meeting to be called in time for that meeting, so at the earliest opportunity the Council got together certain members to look into the matter and do necessary work, and a special meeting on the previous day had regularized matters by appointing a Special Committee consisting of these members, and he would now give their report. An emergency had occurred and had to be met in some way. The special committee had brought the Bye-laws into conformity with the Association's present-day administration. No revolutionary changes had been made. The report of the special committee had been very thoroughly considered by the Council, and, after certain final emendations, approved. The solicitor, Mr. Wigans, had been consulted on all points. The Bye-laws had also been altered to comply with the provisions of the Charter. In addition a few minor alterations had been made which he had no doubt would meet with general approval, such as an extension of the functions of the Research Committee, the definition of the term "Assistant Medical Officer," etc. There was not time to go into the matter fully on that occasion, but members could rest assured that no liberties had been taken, and there would be full opportunity later in the year, if the Association wished, to further emend the Bye-laws. They were not fixed for ever, and it was always possible to go to the Privy Council for approval of any additions or alterations found necessary. He therefore begged to move:

"That the Association approves the action the Council took in regard to the Bye-laws on June 1, 1926; they approve of the calling of a special meeting on July 12; of the appointment of the Special Committee; and now confirm the findings of the Special Committee as amended by the Council at its meeting on July 12, 1926, and the Association declares the Bye-laws thus amended are the Bye-laws of the Association from July 13, 1926."

Dr. G. D. McRAE seconded.

Dr. Collins asked if the Special Committee had considered the stopping of the Journal in the case of those in arrears with subscriptions. Bye-law 19 now authorized the stopping of the Journal to those in arrears, but it did not define when they were in arrears. That was important, both from the point of view of the Treasurer and the Journal. By rule subscriptions were in arrear on January 2. He thought the time at which the Journal would be stopped should be indicated. He thought it would not be unreasonable to say that a member was in arrears on March 1, but the Treasurer thought that too severe.

The Chairman agreed that three months was rather severe.

Colonel LORD explained that there was already a resolution in existence with regard to the stopping of the Journal in such cases, and the printers had received certain instructions on that point. It was laid down in the amended Byelaws that "In the event of any member being in default with the payment of his annual subscription, he shall only be entitled to receive the Journal on payment of the published charge thereof." The Solicitor advised that immediately a man was in default for his subscription the Association was entitled to send him in a bill for the cost of any Journal subsequently received, and that such cost could now be recovered at law. All the Committee had done was to go to the Solicitor

with the views the Association had already expressed on this matter, and ask for suitable wording to give effect to them. Those words he had read out. As to when it would be advisable to cease sending the Journal to a member in arrears with his dues was another matter. According to the new Bye-law it was now possible to recover the cost of the Journal, however long supplied to defaulting members, so that the complaint that a defaulting member received Journals, say, for two years, the cost of which in the past the Association could not recover, had been effectively met.

The CHAIRMAN suggested that the meeting accept the Bye-laws, as amended. The Special Committee, and especially Colonel Lord, had devoted a tremendous amount of time and care to the matter and were deserving of the Association's warmest thanks. Was there any amendment to any particular clause?

There being no amendment, the CHAIRMAN put Colonel Lord's resolution and declared it carried.

### MOTION INVOLVING EXPENDITURE OF MONEY.

The meeting approved of the recommendation of the Council that the sum granted to the Registrar for clerical assistance should be advanced from £100 to £130 per annum.

THE BRONZE MEDAL AND PRIZE OF THE ASSOCIATION FOR 1926.

The CHAIRMAN announced that the Bronze Medal and Prize of the Association had been awarded to Dr. Peter Knight McCowan, Assistant Medical Officer, West Park Mental Hospital, Epsom.

### DATES OF QUARTERLY MEETINGS.

The dates of the Quarterly Meetings of the Association and Quarterly Meetings of the Council were agreed provisionally as follows:

Tuesday, November 16, 1926; Tuesday, February 15, 1927; Tuesday, May 17, 1927.

### THE MAUDSLEY LECTURE.

The CHAIRMAN announced that the nominee for the Maudsley Lectureship for 1927 was Dr. Edwin Goodall.

### ELECTION OF ORDINARY MEMBERS.

The CHAIRMAN nominated Dr. R. Worth and Dr. Brooks Keith as scrutineers of the ballot at the election of ordinary members.

The following were unanimously declared elected:

NORMAN ARTHUR ALBISTON, M.B., B.S.Syd., D.P.M., Assistant Medical Officer, Horton Mental Hospital, Epsom.

Proposed by Lt.-Col. J. R. Lord, and Drs. W. D. Nicol and R. Worth. JOHN FORD ANDERSON, M.D., L.R.C.S., M.R.C.P.Lond., 54, Finchley Road, London, N.W. 8.

Proposed by Sir Frederick Mott, and Drs. R. Worth and F. L. Golla. WILLIAM HOSIE, M.B., Ch.B.Glasg., Assistant Medical Officer, County Mental Hospital, Mickleover, Derby.

Proposed by Drs. G. N. Bartlett, J. H. MacDonald and W. R. McGlashan. Archibald Jennings Ironside, M.B., Ch.B. Aberd., Examiner of Mental Defectives, South African Schools. The Mental Hospital, Pietermaritzburg, Natal, South Africa.

Proposed by Drs. H. de M. Alexander, R. Worth and G. Warwick Smith. Rosalie Evelyn Lucas, M.B., Ch.B.Brist., M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Kingsdown House, Box, Wilts.

Proposed by Drs. H. C. MacBryan, E. M. Johnstone and Elizabeth Casson.

JOHN MUIR MACKENZIE, M.B., Ch.B.Glasg., Assistant Medical Officer, Rubery Hill Mental Hospital, Birmingham.

Proposed by Drs. T. C. Graves, C. W. Forsyth, and Isabel F. King.

GEORGE FRANCIS MAY, M.D., C.M.McGill, L.S.S.A.Lond., Medical Superintendent, Durham County Mental Hospital, Winterton, Ferryhill, Durham. Proposed by Drs. Daniel F. Rambaut, G. Warwick Smith and R. Worth. ELIZABETH DILL RUSSELL, M.R.C.S., L.R.C.P.Lond., D.P.H., Assistant Physician, Mental Hospital, West Koppies, Pretoria, South Africa.

Proposed by Drs. E. W. Swift, A. L. Muncaster and Gordon J. Key. ROBERT LAUDER MACKENZIE WALLIS, M.A., M.D.Camb., Chem. Pathologist,

St. Bartholomew's Hospital. 103, Harley Street, W. 1.

Proposed by Lt.-Col. J. R. Lord, Dr. W. D. Nicol, Sir Maurice Craig and Lt.-Col. Edwin Goodall.

HUBERT TURNER PENN YOUNG, M.B., Ch.B.Edin, Medical Officer, H.M. Prison Service. H.M. Prison, Parkhurst, Isle of Wight.

Proposed by Dr. W. Norwood East, Lt.-Col. J. R. Lord and Dr. R. Percy Smith.

### PAPER.

The Madness of Ajax as conceived by Sophocles, Clinically Considered, by Dr. G. A. AUDEN (vide p. 503).

The CHAIRMAN said all who had heard Dr. Auden's psychological study must be struck by his keen insight into the mind of the great tragic poet, and the cultured criticism of the story of Ajax. They must all feel indebted to Dr. Auden, who had tackled so difficult a subject so skilfully. It was no easy task to analyse the hidden mental states of characters in fiction, and when such a character was portrayed by one who was himself the subject of an inquisition in lunacy, the difficulty was not decreased. Sophocles, it had always seemed to the speaker, appeared to have invested his hero, Ajax, with attributes very strongly marked in his own mental make-up-namely jealousy and rivalry. He could also give free rein in his character to these qualities which he was, perforce, obliged to set bounds to in himself; he could, moreover, make his hero suffer a fate he himself would gladly have inflicted on Euripides. Dr. Auden had given his interpretation of the classical clinical picture in a very intriguing manner. It would be interesting to hear how far those present accepted Dr. Auden's reading of the madness of Ajax as conceived by the Greek poet—the "Attic Bee"—who had given in that tragedy an exquisite delineation of human emotions carried to abnormal excess in the person of a physical Colossus who was wanting in the finer psychical structure of reasoned equilibrium—vulnerable not only in the armpit, but in control centres. In the story there were two unchanging human elements—then as now, cherches la femme-Athene; then, as now, conduct, the acid test of sanity.

Dr. T. B. Hyslor thought those present had had a very interesting and suggestive treat. Listening to the evidence of clinical phenomena as referred to by Euripides, where slaughter took place of several members of the family and the person responsible for it was regarded as more or less unaccountable for his actions, reminded him of a case in which he had tried in vain to get the criminal acquitted on the plea of insanity. The criminal had been found guilty of killing four members of the family in one room, and afterwards gone to sleep on a sofa for two hours. He had urged the plea of epilepsy, and he wished the Lord Chief Justice who had said he had never heard of such a thing could have been present to hear that Euripides had given an account of the actual malady. The works of Sophocles were always of extreme interest, because, like Shakespeare, he had an intimate knowledge of humanity and of clinical psychology. Reference had been made to the McNaughton Rules, and he ventured to suggest that Ajax would come under them, but it was a question whether the British Medical Association and certain of the Lords Chief Justice would accept that. There had not been, apparently, any advance in that connection since the time of Sophocles and the ancient writers; in fact, the knowledge of the medical profession, great as it might be, had not been successful in penetrating the cranium of the legal profession!

Prof. G. M. ROBERTSON expressed his appreciation of the cultured address delivered by Dr. Auden. It was pleasant for those in a clinical medicine society to hear an address from one who introduced into such problems classical and literary acumen. With regard to the description of the symptoms, he thought they must all agree with Dr. Auden that the account of delirious insanity as depicted by Sophocles in the mental derangement of Ajax was about as perfect

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as it could possibly be. He did not know that they had got at the bottom of the problem from the ætiological point of view. According to the account, the trouble originated from a psychic cause: an honour which Ajax had expected had not been given him, and he was distressed. As a result, it appeared that for a considerable time he showed symptoms of mental abnormality. He was depressed, irritable and obviously changed. Then came the sudden onset of the delirious episode. It seemed unusual to have delirous symptoms following, after a lapse of time, a psychic cause, and he could not help thinking that, although the account Sophocles had given of an attack of mental derangement was as perfect as it could possibly be, the course of events as regards ætiology was not quite as satisfactory according to modern views. It seemed to him that, before the acute delirious episode, something must have been superadded. Dr. Hyslop had suggested that epilepsy might have accounted for the condition. It might, possibly, have been an attack of malaria, such as was also, to some extent, suggested by Dr. Auden. speaker could not help thinking that there must have been some acute cause, some toxic cause, to produce the final delirious episode. That ancient classical writer knew exactly what he was writing about, and it confirmed what had struck the speaker when reading Homer-not in the original, but in Pope's translation -that the mentality of people of more than 2,000 years ago was very much the same as the mentality of those of the present day. Apparently when the ancient peoples became deranged they suffered from much the same clinical symptoms as people in modern times.

Dr. H. J. Norman was surprised that those who had spoken had not made another possible suggestion. It seemed to him that it was not impossible that there might have been some alcoholic basis. There was the sudden outburst, excitement, restlessness, fury and then subsequent depression, and then the suicidal attempt. It might be said that Sophocles did not mention that, but in that he was only following tradition. Such things were never mentioned! He did not know whether he could quite agree with the attitude Sophocles took up. The fact that there was an outburst of fury, delusions and hallucinations, followed within a few hours by Ajax making a very long and connected speech, suggested poetic license. It was just as reasonable to evoke the alcoholic factor as the epileptic. The latter diagnosis was probably more supported by the fact that, within a very short time, Ajax had recovered sufficiently to speak coherently.

On the motion of the Chairman a hearty vote of thanks was conveyed to

Dr. Auden for his delightful and interesting paper.

Dr. G. A. Auden, in returning thanks, said he had considered the question of alcohol, but there was no record of any wine arriving at the right time. Joking apart, there was no doubt that the ancients did recognize some form of delirium tremens.

### AFTERNOON SESSION .- TUESDAY, JULY 13.

In the Great Hall of the British Medical Association House.

Dr. M. J. NOLAN in the Chair.

THANKS TO THE RETIRING MEMBERS OF COUNCIL AND OFFICERS.

Prof. G. M. ROBERTSON said the duty that had been assigned to him was a very pleasant one, namely, to offer a vote of thanks to the retiring members of Council and Officers of the Association for the manner in which they had discharged their duties during the course of the last year. Unfortunately, members had to deplore the death of their President, concerning which sad event, however, he was not now proposing to offer any remarks. But with regard to the other officers of the Association, upon the success of whose duties its success so largely depended, he had nothing but praise. In reference to the General Secretary, members well knew how energetic he was, and those who had filled that post in the past knew how large an amount of work he had to perform. Yet it was the experience when the time came for the work to be carried on, that everything had been so well organized, the result was invariably successful. As to the Honorary Treasurer, no words of his were needed in commendation of what he did, or to express how highly members regarded him. For many years the Association had

been very fortunate in its Treasurers, and he hoped that state of things would long continue. (Applause.) Then there were the Editors of the Journal. As he stated at the morning session, during the last year the Journal had really excelled itself; it had increased both in circulation and in bulk, as well as in the quality of its contents, and there was every reason to feel pleased at the way in which the Journal had been conducted. He, and many more, were very proud to know the Association had a journal which was so valuable from a scientific point of view, and that it contained so much matter of real interest. The fact that the Chief Editor, in addition to performing editorial duties, had much else on hand, was an additional reason why a vote of thanks should be accorded to him. (Applause.) The Auditors had also to be thanked; they kept the Treasurer in order. It might be said by some that the work of the Hon. Auditors was a sinecure, but whatever they did was done very well.

He had also to refer to the members of the Council, many of whom did a great deal of work in connection with projects and schemes which the Association had in hand. Those projects had been carried out in a very efficient manner.

He wished also to speak a word particularly in regard to the work of the Secretaries of the Divisions. Of course, the General Secretary of the Association had a very great deal to do, and he occupied a very prominent position, and all accorded him the praise and the respect due to him for his work. Secretaries of Divisions were not so much in evidence, but they also had a large amount of work to do, and the success of the Association much depended on the way in which they kept the Association together in the various Divisions. (Applause.)

He had omitted to mention in its proper place the Registrar. For many years the Association had a very efficient Registrar, the late Dr. Miller, whom all members came to love. They were fortunate in having found a successor who was discharging the duties as efficiently as his predecessor had done, and at a time when the work of the office had largely increased. The Association's Nursing Certificate had become still more popular among mental hospital staffs. Promotion nowadays often depended on its possession. The number of those who presented themselves at the Association's nursing examinations had largely increased, and there had been changes in the form of certificate they received, and this meant an increase in the work of the Registrar.

In addition there were various standing committees and the sub-committees who had done a great deal of work in the year. For example, owing to the obtaining of a Royal Charter, it had become necessary to revise the Bye-laws, and the amount of work this must have entailed could only be conjectured; it must have taken many days' work to have prepared these Bye-laws, and, without the Association generally having to be troubled, the Bye-laws in their new form were ready and were handed in at the right time. For that and the other work warm thanks were deserved. He did not know whether the Association had thanked sufficiently those who took so much trouble in obtaining the Royal Charter and the consequent style the Association now possessed, but he knew that Dr. F. H. Edwards—(Applause)—and no doubt others also, worked very hard in this connection and spent many hours over it.

He therefore asked that the best thanks of the Association be accorded to the members of the Council and various officers of the Association for the work which they had gratuitously and so efficiently done for the Association during the past year. (Applause.)

Dr. R. Langdon Down said it afforded him great pleasure to second this proposal of thanks. He would not follow the mover and mention in detail the various officers who had done so much for the Association, but he could cordially endorse all that Prof. Robertson had said. He would like to emphasize the gratitude which members felt to the officers as a whole for the splendid voluntary work they gave. It was indeed remarkable that a great Association such as this should be able to feel satisfied with the work of volunteers, especially having regard to the very widely scattered and rather difficult administration they had to carry out. He therefore seconded this proposal with very sincere pleasure.

The resolution was carried by acclamation.

The CHAIRMAN said he had to thank the meeting on behalf of the Council and officers for the vote of thanks which had been so admirably proposed and seconded. He was sure that those concerned felt that they had no higher reward than the generous approval of their work entertained by the members generally.

### INSTALLATION OF THE NEW PRESIDENT.

The CHAIRMAN said it now devolved upon him to induct the new President, Lt.-Colonel John Robert Lord, C.B.E., M.B. It was an unexpected, yet an agreeable duty. It was always a grateful task in any way to aid in the recognition of merit—particularly when that merit had been gained by a colleague in the same field of work-merit which reacted to the benefit not only of mentally-afflicted persons in a direct way, but indirectly on those who had neither time nor opportunity for wide-spread study. Fortunately, Colonel Lord's record was so well known to members that it would be unnecessary for the speaker to recite it, were it not a very real pleasure to review a career such as his. It was one of great distinction, of recognized public service of a high order, both in times of peace and of war, and had been marked by a marvellous industry of a valuable and unselfish literary character. When Colonel Lord was at Edinburgh University, he displayed a dual ability which had stood him in such good stead in recent years. As a youth the President was an earnest and successful student, and at the same time busily engaged as secretary and organizer of the University Battery of Artillery. He later concentrated on psychiatry, and he had had a wide experience in Carmarthen, Hanwell, Bexley and Horton Mental Hospitals, and the last-named institution he organized and developed as a war hospital, receiving his commission as Lt.-Colonel, and becoming its officer commanding. He was now the senior medical superintendent of the London County Council Mental Hospital Service. For his war services he was awarded a Commandership of the Order of the British Empire (Mil. Div.). All through he had given unceasing interest to the work of the Royal Medico-Psychological Association, and since 1911 he had been one of the Editors of the Journal of Mental Science. He found time to contribute original articles, and to write a large number of reviews, which were characterized by concise criticism and a clear grasp of the subjects with which they dealt. The hope expressed by Dr. Taylor last year that Colonel Lord's election to the Presidency would not deprive the Association of his literary work was one which actuated all the members. He had done valuable pioneer work in connection with the appointment of honorary mental hospital visitors and the establishment of occupation therapy, and had lectured and written on both subjects, and brought them both into practical being. Colonel Lord was also Secretary of the National Council of Mental Hygiene and a member of several psychiatric societies abroad. This Association, said the Chairman, now desired to mark its appreciation of the brilliant record achieved by the Senior Editor of its Journal by making him President, confident that he would carry on the duties of that office with the same ability and energy which had been such an outstanding feature of his professional life. In passing on to Colonel Lord the Badge of Office, which received such lustre from its latest holder, he could not but feel that the spirit of the late President approved of its bestowal on one whose intellectual industry had been devoted to spreading international knowledge of psychological medicine, and to a betterment of those who were mentally afflicted.

Dr. Nolan then invested Colonel Lord with the Presidential Insignia and vacated the Chair.

The President (Lt.-Colonel J. R. Lord), on taking the Chair, said: Dr. Nolan. I am very sensible of the very kind remarks you have made about me personally, and I am very grateful to the Association for the honour they have done me in electing me President. The Association is grateful to Dr. Nolan. We know that he has many private troubles and anxieties at present, and to sever himself from his home just now shows that the Association's interests lie very closely to his heart. I hope that, on our united behalf, I can express to him our deep gratitude that at such a moment he has come over from Ireland to fill the gap caused by the death of our late President. (Applause.)

The Presidential Address this year has grown unduly bulky—far beyond what can be read at one sitting. However, I have had the opportunity, at the special meeting of the Association, at the Council meeting, and again this morning, of referring to matters dealt with in the first part of the Address, which has to do with the work of this Association, and the improvements which can be effected in its administration, particularly in regard to making the Association a meeting-place, in a more practical way, for the junior psychiatrists of this country; and I feel that in trying to institute throughout this country clinical meetings to which

assistant medical officers especially and other psychiatrists and medical friends will be welcome, we shall set in motion activities which will be of great benefit to the practice of psychological medicine generally.

The President then delivered abstracts from his address. (The full address was published in August as a special number of the Journal.)

On the conclusion of the address, which was listened to with the deepest interest, the President was accorded a hearty vote of thanks.

### VOTE OF THANKS TO THE PRESIDENT FOR HIS ADDRESS.

Dr. C. HUBERT BOND said that with very few moments' notice given him that he should propose this vote of thanks, he was grateful for the unwritten law which forbade discussion or critical comment upon the President's address. The President had concluded in an apologetic tone for the idealistic and philosophic trend of his remarks, but no apology whatever was needed, for, while it had been well said that there was nothing so demoralizing as the attempt to enforce impossible ideals, the ideals which the President had set forth were all capable of attainment, and, in the case of those who had ears to hear and eyes to see, assuredly they would be attained. Indeed, here and there were portents of that Millenium for psychiatry which the President had portrayed in such stimulating words. Moreover, was it not true that every one imperatively needs some philosophy of life, however simple or humble, to which to cling, to keep him or her from falling? No doubt Colonel Lord's reminder of the axiom of Sylvius, "Whoever is unable to treat the diseases of the mind is no physician," was an unpleasant challenge to those whose calling was psychological medicine, as well as to the profession as a whole, and he believed the President was wholly right in his wish to see a tightening up of the connection between the practice of psychiatry and that of general medicine; also that in order to bring this about the President was right in taking a broad and philosophical view of psychiatry's domain, in wishing to extend the borders of research into the homes and environments of the patients and, as he apprehended the President meant, in desiring also to eliminate unhealthy factors in childhood, the disastrous effects of which were being more and more recognized. Colonel Lord was surely right, too, in laying hold of that important admission, by no less a personage than the President of the Royal College of Physicians of London, that the bulk of patients seen in general practice manifested at least some disorder of mind, conduct or feeling. The President's words as to the impossibility of limiting the practice of psychiatry to mental specialists would be welcome reading to the speaker's fellow Commissioners, for they powerfully supported the recommendations, made individually at the Commissioners' visits and collectively in their Annual Reports, for the appointment of visiting specialists, and for the creation at each mental hospital, of an adequate team of workers. The President had well said that the issues were tremendous, and delay in making these arrangements was much to be regretted. He asked—if he might do so without transgressing the rule concerning discussion of the President's address—in relation to any suggestion to curtail, for the sake of psychology, the study of biology and anatomy, that members would remember that Dr. Henry Head and the late Dr. Rivers, whose work the President so signally extolled, made themselves, as a preliminary step, masters of those sciences.

Members had listened to the President's address with the greatest possible pleasure. In delimiting—or rather in refusing to limit—the domain of psychiatry, it was manifest that in order to scan the horizon of her claims, no dismay or fear of heights had assailed him in finding out and climbing a lofty pinnacle. In now moving this vote of thanks, coupled with hearty good wishes for a happy and fruitful year of office, he believed their appreciation would best be conveyed to Colonel Lord by a pledge, which he now offered on behalf of the members, that when this address appeared in the Journal they would read it with careful and responsive attention. (Applause.)

Prof. G. M. ROBERTSON said it gave him much pleasure to second the vote of thanks which Dr. Bond had so ably proposed. All present had listened with the deepest interest to what Col. Lord had said, and would read it with great pleasure when, later, it appeared in the Journal. He had heard many presidential addresses, but he had listened to none with greater interest and pleasure than that just delivered. It was full of philosophical ideas and interesting and even novel

psychological conceptions, and he knew from the matter omitted owing to stress of time, which he had had an opportunity of reading, that there were many practical ideas in it too. If only these ideas could be introduced into the mental hospitals, it would be greatly to the advantage of those who practised the specialty, the patients, and the general public.

The vote was carried by acclamation.

The President thanked the proposer, the seconder, and the meeting for the vote of thanks. Perhaps after reading the address members would regret some of the pleasant things which had been said about it that afternoon. He hoped the best construction would be put on his criticisms of the Association's work and administration, but he had long felt that the time had come for somebody to speak plainly and with no uncertain voice on some matters—matters which he thought of greatest importance to the Association and to psychiatry generally.

### MORNING SESSION .- WEDNESDAY, JULY 14.

In the Great Hall of the British Medical Association House.

The PRESIDENT in the Chair.

### PAPER AND DEMONSTRATION.

Some Observations on Encephalitis Lethargica, by Dr. R. L. MACKENZIE WALLIS.\*

He said: In 1911 I had the pleasure of reading a paper before this Association. My remarks to-day are in connection with encephalitis lethargica, with especial reference to hepatic insufficiency in this disease. This research is partly experimental, partly clinical.

I will deal, first of all, with the experimental observations. I have some very interesting investigations to report. In the winter of 1921-22 we had an outbreak of encephalitis lethargica amongst laboratory animals. This occurred in St. Bartholomew's Hospital, and the histological investigations which were carried out by Dr. Archer, who was working in my laboratory, have been published. I was concerned with the investigation of hepatic insufficiency in these experimental animals. Before that, Oliver with Baker had observed a similar condition in his own animals, and experimented with arseno-benzene injections. They found that by giving repeated doses of it to rabbits, a large quantity was needed to kill the animals. But certain animals died after a single injection. In trying to find out the cause of this, they discovered histological changes in the brain similar to those met with in encephalitis in human beings. The interesting point about Oliver's observations was that his infected animals were in such a state that one single small injection of arsenical compound was sufficient to cause death. That has been our experience in cases of salvarsan poisoning: it is only those patients with liver damage who respond to arsenical poisoning after a single injection. In the experimental animals it is found that the greatest histological changes occur in the kidneys, in the liver, and in the spleen, and that the changes in the brain are typical of encephalitis.

As far as possible these tests of hepatic function were carried out on these animals. The method of test in rabbits was to estimate the lipase content of the serum, which is easily carried out. In the normal rabbit 1 c.c. of the serum requires 37 c.c. of normal soda to neutralize the acid produced by digestion of lipase. In human sera the results are very similar—that is to say, 33 is the normal figure. In rabbits which had recovered from severe symptoms of encephalitis, the lipase of the serum was found to be 74, or double the normal figure. In rabbits inoculated with vaccinia virus similar figures were obtained, namely, just double the normal values. The result showed that during the acute

<sup>\*</sup> We regret that owing to a serious illness, the author was unable to prepare his paper for publication together with the illustrations. We hope to publish this in due course.—Eds.

stage of a filter-passing disease there is a rapid increase in the lipase content of the blood, and this is particularly so in animals showing a high degree of immunity. This association of a high lipase content with mononuclear activity is a very striking point, and it is one which we have observed in encephalitis in human beings. That is to say, during the acute stages the lipase content of the blood-serum increases, and it is highest in those persons who show a high degree of immunity to this virus. In addition to the estimations of the lipase content of the serum, estimations have been made of the cholesterol content. In the filter-passing diseases the cholesterol content of the blood increases with the lipase content; and so those two estimations give one a very good idea as to the stage of immunity, and also the value in prognosis. (Slides.)

I want particularly to emphasize what these slides show, because in encephalitis lethargica in human beings you see how closely they correspond to the filter-passing diseases in animals.

Another point noticed in animals was that in some of them the blood-sugar was raised above the normal, and in some of the cases glycosuria occurred.

The first sign these animals showed of this infection was wasting, and it occurred without there being any loss of appetite; indeed, the appetite was increased, and that was the first indication of disease. Some animals, which had little of no resistance, died before this wasting set in; sometimes death took place only 24 hours after the onset of symptoms. Most of the animals infected with this spontaneous disease showed no nervous symptoms, except towards the end, when they developed convulsions; and in one case the convulsions were so severe that the rabbit's tongue was almost bitten through. The nervous symptoms were in comparison with the histological changes slight met with in the brain after death.

So the chief feature of this disease, in laboratory animals, was the profound effect of the virus on the kidneys, the liver and the spleen, and the almost complete absence of nervous symptoms. The blood showed evidence of hepatic insufficiency, and in some of the animals there was an increased blood-sugar content and glycosuria. These changes are not solely characteristic of encephalitis; they occur in other filter-passing diseases, such as vaccinia. This slide shows the results obtained. These investigations give one a clue to a means of approach of this problem of encephalitis lethargica in the human. A number of observers have emphasized the hepatic aspect of encephalitis lethargica. Ellis found an increase of ammonia nitrogen in the urine and an absence of phosphoric acid, and he suggested that this was due to hepatic derangement.

With regard to the investigation of encephalitis lethargica in human beings, it was necessary to select certain tests for hepatic insufficiency, and they were found to be most useful in an investigation of other liver diseases. These tests were the levulose-tolerance test, the lipase content of the serum, the cholesterol content of the blood, and the Vandenburg test for bile-pigment in the blood. The levulose-tolerance test is a very delicate one, and it is used extensively in investigating the effects of salvarsan injections on the liver. It consists in estimating the blood-sugar hour, hour and hours after the ingestion of 25 grm. of levulose.

When there is liver damage, you find that the levulose, instead of being packed away by the liver, accumulates in the circulation, and there is a rise in the blood-sugar. The lipase is 100 times the previous or normal level.

Applying this test to encephalitis lethargica we obtain some interesting results. (Slides.)

Here is a case of a cerebral tumour, with symptoms suggestive of encephalitis. There is the same type of glucose-tolerance curve, with the blood-sugar remaining at a very high level, and then falling in 1½ hours, though not so markedly as in encephalitis lethargica. This is particularly interesting, as patient was admitted as a case of encephalitis lethargica. (Slide.)

On examination he was found to have a positive Vandenburg, 4 units of blood lipase. He died, and post-mortem the liver was found to be studded with small patches of necrosis. In the brain there was a soft fluctuating tumour in the upper part of the third ventricle, projecting into it from the position of the right optic thalamus. This tumour was a cyst, and it had at its base a hard growth, but no secondary deposits could be found.

The interest of these curves centres around the influence of the mid-brain on

carbohydrate metabolism. It is of interest to record that I have seen three cases of acute diabetes in encephalitis lethargica. One of the patients was admitted as a case of diabetic coma, and the blood-sugar was ·53—that is, five times the normal value. This patient was treated by dieting and insulin, but without effect on the blood-sugar. Ten days after the onset the blood-sugar fell to normal, and there was no glycosuria, even when the patient was on ordinary diet. She recovered completely, as far as the diabetes was concerned, and in so far as she had no return of the symptoms, though the nervous signs and symptoms have not yet cleared up. I have seen three cases of what you could describe as acute diabetes occurring in encephalitis lethargica, and I can recall several other cases of a similar nature, and it is possible that the so-called acute diabetes in the literature may be of the same nature as these cases.

A number of controls have been carried out, particularly with cases of paralysis agitans and cases of tetany. (Slide.)

Here is a case of parathyroid tetany, which showed the normal levulose-tolerance test and the glucose-tolerance test, which is very striking. Whilst this glucose-tolerance test was going on, the patient developed a typical attack of tetany. During the attack I removed blood from the vein, estimated the calcium content, and found it half the normal. There is also a negative Vandenburg, and a normal lipase content. That serves as a very good control, because there is no evidence of any hepatic insufficiency. The same applies to cases of paralysis agitans. I have examined 6 cases, and 3 of them have shown hepatic insufficiency, as judged by these tests, the other 3 showing no changes at all.

With regard to the results obtained I have investigated 40 cases of undoubted encephalitis lethargica, and in 25 of them there has been evidence of hepatic derangement. As many of these cases have come to post-mortem, the results, as far as the liver is concerned, have been confirmed by naked-eye and by histological examination. Many cases have been investigated, and have acted as controls since the tests were negative, and post-mortem they have been shown to be cases of tuberculous meningitis, or poliomyclitis, or other diseases of the nervous system.

Three years ago I saw 8 cases of manganese poisoning in Bristol, and they showed the typical Parkinsonian syndrome, and were indistinguishable from encephalitis lethargica. All those men worked in the Docks, and it was their duty to shovel out manganese dioxide from the ships into the cellars where it was stored. How the manganese got into their system is not known; possibly the dust of it was taken into the lungs and absorbed into the blood from them. They developed the Parkinsonian syndrome two years after starting this work, and they had gone on for years in this condition.

Another disease is encephalitis hæmorrhagica after salvarsan injections, which also showed hepatic insufficiency and damage to the mid-brain. But this disease is so acute and so rapidly fatal that it is impossible to carry out investigations on it.

The close association between manganese poisoning and encephalitis lethargica is so striking as to suggest that manganese and the filter-passer viruses act on the same system, and since it is the brain, the liver and the spleen that are most affected, one may conclude that the reticulo-endothelium involved is an explanation which, if true, bids fair to become of increasing importance. The chief source of manganese poisoning in recent years has been chipped glass. Glass made from silica containing iron is of a dirty yellow colour, and in order to whiten it the makers put in manganese dioxide. This is added in excess and the result is that the glasses are not white, but are tinged a violet colour. If into one of these glasses you put distilled water, and allow it to stand for a time, an appreciable quantity of manganese can be extracted from the glass, and it is possible that some of these cases of so-called encephalitis lethargica may really be due to manganese poisoning.

These results emphasize the relationship between the mid-brain and carbohydrate metabolism, so that the old puncture diabetes is coming into its own. And the influence of the nervous system, even on pancreatic secretion, is now being recognized by physiologists.

The PRESIDENT said it would be agreed that members had just listened to a most scholarly and illuminating paper—scholarly because it brought to one's mind diseases of great historic importance, and illuminating because it appeared to him that Dr. Mackenzie Wallis was paving the way for a new branch of medicine. It would be well to take the discussion after hearing the next paper.

### PAPER.

Some Symptoms Referable to the Basal Ganglia, occurring in Dementia Pracox and Epidemic Encephalitis, by Dr. C. FARRAN-RIDGE (vide p. 513).

### Discussion.

The President said that members had just heard two most remarkable and highly original papers, both very instructive, and he did not doubt there were a number present who would wish to discuss them. In regard to the latter paper, long ago it had dawned upon him that ultimately many cases now looked upon as cases of dementia præcox would need to be taken out of that category and classified in the groups of toxic and organic psychoses. The importance of mesencephalic and basallesions in cases of disordered conduct was being more and more recognized, and organic lesions or disordered or uncontrolled functioning of these regions he had no doubt would in time be shown to be at the root of many obscure psychotic cases, now largely unclassifiable in the commonly accepted groups of symptom-complexes or syndromes and other functional mental and nervous disorders.

Sir ROBERT ARMSTRONG-JONES, C.B.E., said he desired, first, to congratulate Colonel Lord on having received the confidence of his fellow-members and been placed in the Presidential chair. A successful year he knew he would have, and a

happy one he hoped it would be.

He agreed that two most interesting papers had just been read. Dr. Mackenzie Wallis's paper was a very learned and scholarly contribution. He asked whether Dr. Mackenzie Wallis considered encephalitis lethargica as a new disease. Its name only dated from Economo, of Vienna, in 1919, and the first appearance of the disease seemed to have been about 1914, yet at the present time there were cases of it all over the world; he believed there were certainly 5,000 cases at the present time. In his own official wanderings he came across cases of it with doctors in private practice, in workhouses—where there were large numbers of cases—and in mental hospitals.

Both readers had referred to the extensive nature of the disease in regard to the area involved by the lesion, i.e., there might be a lesion not only in the meninges, in the cortex, but in the centrum ovale, in the pons, in the medulla, and in the cord. This accounted for the difficulty that was experienced in diagnosis; the disease might be atypical, and it was also very polymorphic. The question was raised at the Paget Club at St. Bartholomew's Hospital recently, and there, in discussing the pathology, the third ventricle was mentioned as the seat.

It was a very important disease from the point of view of juvenile delinquency. He recently gave evidence before a Departmental Committee of the Home Office, where very pertinent questions were asked as to the relationship between delinquency and encephalitis lethargica; but he feared his experience of the latter was too limited to enable him to give a dogmatic opinion. But there was no doubt that when the cerebral cortex and the association neurons were affected, there were likely to be disturbances of conduct; mental symptoms must arise. The pathology had been described as neurophagi—achromatolysis—filling of the perivascular spaces with leucocytes—and associated with such a pathology there must be some definite mental change.

He would like to know the age of the female patient who recovered so phenomenally after suffering from acute diabetes.

Dr. G. A. Auden agreed that the Association was to be congratulated on having heard two such papers. In regard to the question put by Sir Robert Armstrong-Jones as to it being a new disease, Prof. Economo considered it to be the reintroduction of the disease which was prevalent in the eighteenth century, but in a recent paper the professor sent to the speaker, he said his belief now was that he had made a mistake in the reading of the literature of the eighteenth century dealing with the epidemic of that time. Hecker gave an account, taken from one of the chronicles of the epidemic, which was akin to the "dancing mania" which took place in the twelfth century, and the manifestations of which were extraordinarily like those of encephalitis lethargica as known to-day. He told how the people who suffered from the disease had jerky movements during the rest of their lives.

With regard to Dr. Farran-Ridge's paper, every symptom which the reader related as being found in dementia præcox was certainly found in children, especially

the peculiar way of putting the finger to the nose, rubbing the nose, and blowing. He had five or six cases of that. In some other cases the children started to breathe more rapidly and continued to do so until they were cyanosed, and then it passed off. This week he examined a boy who was charged with a sex assault, and who repeatedly, as he lay in bed, continued the rapid breathing until he became exhausted. The same was true of the spasmodic cough. In the case of two boys who were in secondary schools, they had had to be removed because of the annoyance caused in the classroom from constant coughing.

There was an extraordinary difference in the mental outlook between the dementia præcox type and the encephaloid type. The latter were always intellectually intent, and some had an amazing knowledge of their own condition. A young metal-worker, aged 18, gave the speaker a list of his symptoms, which he had compiled, including watering at the mouth, nervousness, dragging of the feet, shutting of the eyes, and stuttering. In another lad Dr. Auden found lip-twitching, double vision, slow movements.

Dr. C. H. Bond said he had nothing illuminating to offer, but he wished to associate himself with others in thanking these two gentlemen for their remarkable papers. He wished the Association could have more like them. He would especially congratulate Dr. Farran-Ridge on his paper, because so many in the room would feel the difficulties of doing such work as Dr. Farran-Ridge had done, situated as medical officers in mental asylums were, with only too few of them to the number of their patients, and remembering also the many other tasks—some spoke chaffingly of those other tasks, but they were for the good of the patient—they were called upon to do. When a gentleman so situated produced such a paper, he was to be warmly congratulated.

He arose to speak because there were a number in the room who, on request, sent the Board of Control returns of these cases, and it was obvious from those returns and the comments which came in, that they generously, out of their time, took a great deal of pains over those returns, and care was taken to make them as accurate as possible. And perhaps they would take it as a little return courtesy on his, the speaker's, part if he gave them the results which had been got out by Dr. Evans, one of the inspectors to the Board of Control (England and Wales), as they were, approximately, to-day. In the mental hospitals it was the sequelæ, not often the acute initial stages, which were seen. One might say that, just at present, there were something like 227 patients in the 98 mental hospitals, and 96 cases of post-encephalitis lethargica in mental deficiency institutions. Of the 227, about 35 were under the age of 16, and 60 between 16 and 21 years of age. So that, coupling those with patients in mental deficiency institutions, there were close on 100 juvenile patients under care.

The meeting had been told, especially in the first paper, of the class of investigation which had been going on, and it was because of the urgent necessity for a closer study that the Commissioners were so anxious to see these cases, instead of scattered throughout the country, grouped together for the purposes of study. Some knew that a certain amount of grouping had been successfully arranged, and was continuing. In Lancashire, for example, there had been a grouping of post-encephalitis cases in two of the mental hospitals, while London had centralized such cases at Epsom in two institutions—those dealt with under the Lunaev Acts at West Park Mental Hospital, and those dealt with under the Mental Deficiency Act at the Manor Institution. And in addition-which was very welcome to the Commissioners—they had set apart 30 beds at the West Park Mental Hospital for cases from the other local authorities, if they cared to send them there. Negotiations were also still in progress to arrange a centre at Oxford, and an offer had lately come from Dr. Menzies at Cheddleton, because he happened to have, among his encephalitis cases, a number of young ones, which rather suggested it would be a good centre to which to add more for purposes of study and treatment.

The London County Mental Hospitals Committee had set apart the wholetime services of a medical officer to a study of the work, and that, surely, was a step in the right direction.

In listening to the second paper, what struck him was that Dr. Farran-Ridge did not relate (and it was not his intention) a single symptom which his hearers had not themselves observed; what he did was to give new thoughts about them. It was an easy matter to go round a mental hospital and notice these things, as

members had been taught to do, but that did not take one very far. They were interesting, and sometimes, amid all the pathos of it, one could not help getting some humour out of those symptoms, but that did not mean that the observer was unfeeling. Dr. Farran-Ridge had grouped the symptoms in a stimulating way, and so afforded to his hearers plenty of room for thought. He did not suppose the reader knew what the President's address was going to be, but he certainly dotted the President's "i's" and crossed his "t's," as also did Dr. Mackenzie Wallis, in that great realm and enlarged sphere which the President justly claimed for psychiatry. Of that there could not have been better illustrations than were afforded by those two papers.

Two humorous points struck him. One did not know whether to be fearful with regard to the manganese in the glass, which Dr. Mackenzie Wallis talked about, or what the prohibition people would say about it, but Dr. Mackenzie Wallis emphasized that it must be distilled water. Perhaps, therefore, the harm was somewhat limited.

As to the tics, he was waiting for Dr. Farran-Ridge to give some tip as to how to deal with them. In travelling about, he, the speaker, often found himself boxed up in an old-fashioned railway compartment, and in these it was impossible to escape down the corridor from people who suffered from these tics. It was disturbing when one had taken some work to do on the journey.

He had greatly enjoyed both the papers.

Dr. Douglas McRae expressed his regret that the present transport facilities of the country had prevented more members being present to hear personally such papers as these; he would have liked every member of the Association to hear them, though he was well aware they would appear in the Journal. Dr. Farran-Ridge had catalogued the symptoms in a striking and illuminating way, so that now, when such manifestations were seen, their import and significance would be enhanced.

He now had under care a boy who was presumably a case of dementia præcox. He had been lying in bed six months, and nothing could be done with him. He always had a very greasy face. Gradually that diminished markedly, and last week the boy got up, with a remarkably clear complexion and a normal mentality. He, the speaker, had also had a case of dislocated jaw. The man was giving a Salvation Army lecture at 6 o'clock in the morning, and his jaw went out. There was also, in his institution, a girl with blepharospasm and conjugate deviation of the eyes; but instead of having convulsions she had put her jaw out. This she did periodically by straining her features, and when the nurse found the jaw was out, she easily put it back again.

The somewhat older members of the Association might remember the epidemic of belching amongst old wives. So frequent was it that when the speaker graduated the practitioner's armamentarium included several æsophageal tubes, and when women started belching with the object of enlisting sympathy, a tube was tied at the end of the bed, and the woman was told that the next time she belched, the tube would be put down her æsophagus and left there until she stopped. It was a common habit among climacterics.

Dr. Mackenzie Wallis, in reply, said he had been very interested in the discussion which had arisen, and particularly in the paper of Dr. Farran-Ridge.

He had made a number of observations on the glucose-tolerance test in dementia precox, and he was very glad to hear that Dr. Farran-Ridge had obtained similar results. In encephalitis lethargica one saw disturbances of the pituitary gland, and sometimes very well marked. Hemi-hypertrophy was a common condition in association with the Parkinsonian syndrome. He saw the obesity of patients following encephalitis lethargica, and they showed definite evidence of almost complete destruction of the pituitary gland. The value of these investigations, both experimental and clinical, in the study of encephalitis lethargica could not, he thought, be too strongly emphasized. It was through investigations of this nature that the organic mental diseases could be approached. He was, therefore, particularly interested in listening to Dr. Farran-Ridge, because from the clinical point of view, some part of those symptoms should be referred to the pathological changes which had been noted, both experimentally in animals and in human beings. Wasting was a very characteristic feature of a rabbit dying of encephalitis lethargica, and that was the chief symptom. The other striking point was the highly infectious nature of this virus. The animals in adjacent

cages would go down at intervals of eight days, and die in the acute stage. When the brain was extracted and the filtered brain extract was dried and left in the cages, those occupants of the cages did not become infected; infection occurred from actual contact.

In reply to the remarks of Sir Robert Armstrong-Jones, he, the speaker, assumed that most observers did not regard this as a new disease in any sense of the term; but in recent years it had taken on so many different manifestations that it seemed to some to be new. One year the liver affections seemed to predominate, and there were many cases of jaundice and vomiting. In another year, nervous symptoms predominated. But he gathered from neurologists who saw large numbers of these cases that they had never seen such acute and varying manifestations as recent epidemics showed. Apparently the greatest change occurred in the ependyma, and, as far as the histological evidence went, the change seemed to be more or less confined to the ependyma of the ventricles and of the surrounding blood-vessels.

The girl who had acute diabetes was aged 19, and she appeared to have completely recovered. But she had a very high degree of immunity, as judged by these other tests.

He agreed with Dr. Bond that the time had come to investigate these cases of encephalitis lethargica. Results have come more from research in the acute stage than in the chronic. And it was in the acute stage that treatment was most hopeful and most beneficial.

With regard to manganese, it was soluble in distilled water, but was insoluble in alcohol!

Dr. FARRAN-RIDGE, in reply, said he had only to thank Dr. Bond and Dr. McRae very much for their generous remarks. The more one studied dementia præcox, the less capricious, arbitrary and eccentric the behaviour of these patients would appear to be. They behaved in the way they did because they must; it was due to the involvement of certain physiological mechanisms. The material in this paper represented only about one-fourth of that which he had collected on this topic, and he thought it might be of interest to present to the Association dementia præcox from the neurological standpoint.

## MESSAGE FROM SENATOR LEONARDO BIANCHI.

The President intimated that a letter had been received from Senator Bianchi, of Italy, expressing his regret at not being able to attend that Annual Meeting, and wishing the Association very successful gatherings.

## THE NOVEMBER QUARTERLY MEETING, 1926.

The President said it seemed possible that Dr. Alfred Adler, of Vienna, might be able to address the Association either on the occasion of the next quarterly meeting, or at a special meeting on the day preceding. A definite announcement on this matter would be made later.

## AFTERNOON SESSION .- WEDNESDAY, JULY 14.

At the County Hall, Westminster.

## 2.30. Reception.

Members were received at the Members' Entrance by Sir George Hume, J.P., M.P., Chairman of the London County Council; Mrs. Dunn Gardner, J.P., Chairman of the Mental Hospitals Committee; Mr. Adrian C. Moreing, M.A., Vice-Chairman of the Mental Hospitals Committee; Mn. Hubert J. Greenwood, D.L., J.P., Chairman of the Horton Mental Hospital Sub-Committee; Mr. H. F. Keene, O.B.E., Chief Officer of the Mental Hospitals Department.

There were also present Mr. Montague H. Cox, LL.B., Clerk to the Council, Mr. Malcolm, B.Sc., Mental Hospitals Engineer, and other Officers of the Council.

## 3 p.m. In the Main Committee Room.

The PRESIDENT in the Chair.

#### OBITUARY.

#### THE LATE DR. ROBERT HUNTER STEEN.

The PRESIDENT said Dr. Bond at the conclusion of the morning session had mentioned the sad news of the death yesterday of a well-known and highly esteemed member of the Association, namely, Dr. Robert Hunter Steen, late Medical Superintendent of the City of London Mental Hospital at Stone, Dartford, and at one time Professor of Psychological Medicine at King's College Hospital. As Dr. Bond intimated, Dr. Steen had been in poor health for some time, which led to his relinquishing first his professorship and then active work at his mental hospital, and subsequently to his final retirement. Dr. Steen had been an earnest worker for the Association, serving it as Honorary Secretary, South-Eastern Division, from 1905-10, and as General Secretary from 1915-19. He was a charming man and of a most lovable disposition, popular and respected everywhere, and a keen and thoughtful psychiatrist. His passing was a great blow to many of them who knew him well, and could not but admire the plucky fight he put up against his advancing infirmity, and his endeavour to continue to do something for psychiatry in spite of his declining strength. Only lately he reviewed a great work for the Journal, and to his, the speaker's, certain knowledge, and up to very recently was writing a paper on a subject he had made peculiarly his own, namely, the housing of those mentally afflicted.

He felt sure they would desire a suitable letter of condolence to be sent to Mrs. Steen.

Members then expressed their regret at the loss they had sustained by rising in their places in solemn silence.

#### PAPER.

The Educational Adaptation of the Individual Child, by Dr. F. C. Shrubsall (vide p. 523).

Discussion.

The President said the paper just delivered was one of the greatest practical interest. Members of the Association hailed from all parts of Great Britain and Ireland, and appreciated that every place could learn, in these matters, from every other. It might be thought by some that the education of coming generations was not of very immediate psychiatric concern, but of recent years this was certainly not true. The lines being adopted in London in this matter—he had had the opportunity of studying them carefully—were biologically sound, not working against, but with nature. They searched for possibilities of adaptation in the first place and then proceeded to develop them. The welfare of the child was the fundamental principle. They recognized the constitutional facts in the case of each child, and there was thus no likelihood that the child would be sacrificed to fit in with any educational theory or machinery.

The Association was very interested in examination papers. There was a great difficulty with some nurses, both male and female, in getting them to record their ideas on paper in such a way as to pass muster with the examiner. As a rule there was no great difficulty about the oral examinations, because one could soon form an opinion as to whether or not the candidate knew his subject. If suggestions could be got from Dr. Shrubsall as to the form in which questions should be set in the written papers, the Education Committee of the Association would be glad to consider them. The Association, he was sure, were very grateful to Dr. Shrubsall for his paper on which he invited discussion.

Dr. G. A. Auden said members sat at the feet of Dr. Shrubsall in this matter. Those in other parts of the country had always looked to the London County Council for guidance; in fact, when Birmingham wanted an education officer they had to come to London to obtain one. He congratulated the Association on having had such a clear exposition of the scheme, whereby it was always kept in mind that the child was father of the man. That was of very great importance to those who were looking at the misfits of life, so as to prevent such misfits becoming so terribly numerous.

Dr. HAMILTON C. MARR said he had listened with great interest and pleasure

while Dr. Shrubsall roamed through the wide field of the child's education as dealt with by the London County Council. The Association, as a body, was directly interested in only a limited part of it, namely, the schools for the mentally defective. He did not wish to be critical, but he would like to know how far the following point had been met with regard to mentally defective children. Many children came from homes which were unsuitable. They went to the schools and received every attention during the day, but afterwards they returned to their wretched homes, where perhaps all the good which had been done them during the day was undone. He asked how far the London County Council had tried to combine with the local authorities to erect hostels associated with these local schools for the mentally defective.

He was sure everyone who had listened to this paper greatly appreciated it.

Dr. F. R. P. Taylor said he was glad to hear from Dr. Shrubsall that some provision was being made for cases of encephalitis lethargica. Occasional cases occurred in the country, and it was difficult to know what to do with them. It would be interesting to know how many cases of the condition there were now in London; also to know in what way the mental defect showed itself, and what was the best way of instructing them.

[Here, at the request of the President, Dr. Auden quoted the figures given by Dr. Bond at the preceding session, q.v.]

Continuing, Dr. Taylor said the difficulty had occurred as to whether postencephalitic cases should be certified. The school medical officer had raised objection because the symptom had not persisted from an early age. It was

difficult, especially in country places, to know what to do with them.

Dr. Shrubsall, in reply, said the practice in regard to cases of post-encephalitis was that notification was received, and every case notified was followed up through the Medical Officer of Health for the borough. The Council was keeping in touch with every case, and the children were followed up in the school as well. It was necessary to apply to the Borough Medical Officers to follow up the adult cases. If a child under 15 did not require very active nursing and treatment, and was not very violent so that he or she could be looked after by a female attendant, 100 such could be admitted into an institution of the Metropolitan Asylums Board. Many were not notified at the time of the original attacks, some were called influenza, and in a number, scarlet fever or diphtheria, apparently because sore throat was an accompaniment of genuine encephalitis, and a bacillus, something like the Klebs-Loeffler, could be obtained from most people's throats. If a case had shown distinct arrest of mental growth, there would be no difficulty in regard to that. When a child did not show the conduct which might be expected in a child of that age, he did not hesitate to certify it as mentally defective; he was speaking of children under 16 years of age. If the disease came on in adult life, he did not see how the Mental Deficiency Act could apply.

With regard to schools for the mentally defective, there were, under the Council, two residential schools for boys, in which some of the most troublesome were placed. Some had been boarded out through the Care Committee organization, but there were no arrangements in regard to hostels. Power could be obtained to send a child to a residential school, but it could not be sent against the wish of the parents to a hostel. He did not think there was, in this country, any institution corresponding to those in Scotland.

## 3.45 p.m. County Hall viewed.

At the conclusion of this paper and discussion, members and their friends were conducted over selected parts of the County Hall, a tour full of interest and instruction. The Council Chamber with its magnificent black Belgian and Cippollino marble dado and beautiful columns and pilasters of *Veine Doree* was much admired. Many fine rooms were visited, including the Library, the members' reading-room and a number of the committee rooms, also the Terrace. Much interest was shown in the modern lighting, ventilation and heating systems. Visits were also paid to the medical examination rooms and laboratories of the Public Health and Mental Deficiency Department.

By the courtesy of the President, each member was supplied with a copy of the illustrated guide issued by the London County Council.

Members and their friends were afterwards entertained to tea in the members' tea-room.

## MORNING SESSION .- THURSDAY, JULY 15.

In the Great Hall of the British Medical Association House.

The PRESIDENT in the Chair.

## Coat of Arms and Motto.

The President said the College of Heralds had granted to the Association a Coat of Arms, and a Motto had been selected. A very good friend of the Association, whose name he had promised not to mention, would present to the Association a new Presidential Badge to fall in with the Coat of Arms. The Coat of Arms would be embodied in the seal of the Association. He, the speaker, as the Warden, had to initial this the final design. Before doing so, he would pass it round for members to see, and it would be placed in the reception room at the Commemoration Dinner that evening. He was sure Dr. Edwards, who had taken a very active part in this matter, would be pleased to answer any questions. Although the Sub-Committee to whom the Association had delegated this business could not choose a design, and strictly speaking, had to take what was granted, the College of Heralds had been courteous enough to entertain several alterations the Sub-Committee had suggested. The Association had now the proper thing as an outward emblem, something created by experts, and something which was both symbolically and historically correct and not an amateur's production.

It was an easy matter to criticize, especially if one had little knowledge of the subject, and mediæval trappings lent themselves readily to witticisms and raillery. He personally was very well satisfied, and he thought that in due course the Association would feel proud of its Grant of Arms.

## A Discussion.

A discussion on "Psycho-Analysis and its Developments" followed and took up the remainder of the morning. An opening paper was read by W. A. Potts, M.A., M.D., and the papers and discussion which followed ranged round the following aspects of the subject: The unconscious mind; Freud's discoveries, his theory and method of "psycho-analysis"; Jung's modifications—"psychological analysis"; the principle of Adler; necessity of analysis of the analyst; cases suitable for analysis; a special kind of education; contra-indications; why analysis is necessary in some cases; possibility of the application of the findings of analysis without actual analysis. Speeches and papers were limited to about 15 minutes. The following gentlemen took part: Dr. M. A. Archdale, Dr. William Brown, Dr. E. Mapother, Dr. H. Crichton Miller, Prof. G. M. Robertson, Dr. T. A. Ross, Dr. Hamblin Smith, Dr. A. Wohlgemuth.

After some remarks by the President on the subject and why he had selected it for discussion, Dr. Potts replied.

## AFTERNOON SESSION .- THURSDAY, JULY 15.

In the Great Hall of the British Medical Association House.

## THE MAUDSLEY LECTURE.

On Thursday afternoon the Maudsley Lecture was delivered by Prof. GEORGE M. ROBERTSON, M.D., P.R.C.P.Edin., on The Prevention of Insanity: A Preliminary Survey of the Problem.

The President, in introducing the lecturer, said this was a red-letter day in the Royal Medico-Psychological Association calendar. This afternoon the company was assembled for two purposes: firstly, to do honour to the name of a great psychologist, psychiatrist and philosopher, namely, that of Henry Maudsley; in the second place, to hear the Maudsley Lecture. This year the lecturer was one who, in everyday life, was putting into practice those ideals which Maudsley had so much at heart. Of present-day British psychiatrists, few names were so well known as that of Prof. G. M. Robertson, so in introducing him to the audience present but few remarks were called for. The selection of Prof. Robertson to carry on the work of Sir Thomas Clouston had been a fruitful one for psychiatry

in more than one direction, and the great work Prof. Robertson had initiated and was continuing with great success at Edinburgh, for the early treatment of those who were mentally afflicted, in nursing homes under the control of the Royal Hospital there, bade fair to render his name famous—as famous as that of any of his predecessors, perhaps even more so. Prof. Robertson had added lustre to the Edinburgh School of Psychiatry, and his election as President of the Royal College of Physicians of Edinburgh was symbolic of the honour and esteem in which he was held in the wider field of general medicine. This Association, of which he had been a prominent and very active member since 1887, and its President in 1922, was grateful to him for having consented to give the Maudsley Lecture for 1926 on such short notice, owing to Sir John Macpherson being unable to fulfil his engagement in that respect.

He then invited Prof. Robertson to deliver the lecture (vide p. 454).

At the conclusion of the lecture, which was illustrated by a series of tables and charts thrown on the screen, there was much applause, and that the lecture had been closely followed and keenly appreciated was obvious.

The President said he felt sure all would agree that there had been no feeling of disappointment in regard to the Maudsley Lecture just concluded. To those present—general practitioners, neurologists, psychiatrists and members of public bodies actively concerned with the care of the mentally afflicted as well as to the public at large-he had given a number of facts which were of the greatest importance. He knew Prof. Robertson's views, and he was sure there was much more he might have said had the time permitted, but the facts he had brought forth were very striking. For instance, few, probably, had realized in going through life that old age was the time when we they most likely to be beset by mental disorders. He had himself studied these matters for 25 years or more, but he had not realized this fact until Prof. Robertson had told him of it some months ago. Another striking fact was that of those brains which went wrong mentally in early life, it was the worst brains which became subjected to dementia præcox, the better brains manifesting the manic-depressive psychoses. A further fact was, that if they could abolish what was known to be preventable insanity, the solution of the problem of how to deal with a large number of the mentally afflicted and the mentally defective would be much simpler. People said that the occurrence of preventable insanity was a reproach to any community. That was his own view, and the psychiatrist, because he was not always successful in curing it, could not be blamed for its continued existence. It was a matter the responsibility for which lay with the community as a whole. All that the psychiatrist could do was to point out which insanities were preventable, and to this end the efforts of Parliament and the local authorities concerned should be directed.

He was sure it was the desire of the company present to heartily thank Prof. Robertson for his very interesting lecture—(Applause)—and for his immense labour in preparing it. It was somewhat a disgrace to our public authorities that Prof. Robertson had had to go to America for the statistics, the lessons of which he had so graphically shown.

It was a great pity the Association, in drawing up its table of mental disorders, did not define them or at least indicate some essential symptoms, pathology or cause by which they could be understood by generations to come. The name given them was of little or no moment; it was the type of case they represented that was important for practical use. The result was that except perhaps for general paralysis, epilepsy and imbecility these statistical figures could not be carried forward in future classifications. They were therefore valueless at present and also for future reference. Nevertheless, pre-war, there were other valuable statistical tables available which had not since seen the light of day even in those cases where they had been restored. So they had to go abroad for information.

Sir John Rose Bradford, K.C.M.G., F.R.S., President of the Royal College of

Sir John Rose Bradford, K.C.M.G., F.R.S., President of the Royal College of Physicians of London, said his old friend the late Sir Frederick Mott asked him, some time ago, when this lecture was first announced, if he would associate himself with the vote of thanks to the lecturer. He was, however, ill qualified to do so, because he was not able to speak from any special knowledge of the subject with which Prof. Robertson had been dealing; but he was very glad to have the opportunity of proposing the vote for many reasons. The first, of course, was on account of having had the opportunity of listening to this learned, thoughtful and inspiring address. Secondly, he was glad to have the opportunity, because this was a

lectureship founded in memory of one whom he could claim as one of his teachers, and for whom he always cherished the greatest regard. But he was especially glad of the opportunity of performing this function for two other reasons: first, as affording an opportunity of expressing the pleasure that all physicians had of forging the links between psychological medicine and general medicine, and it was clear, from the lecture which had just been delivered, that there were many such links, and that if preventive medicine and psychological medicine were to progress, the two must work hand in hand. He was also glad to have the opportunity he was now enjoying, as it was an occasion on which the President of the College of Physicians of London had the opportunity of welcoming a President of the sister College in Edinburgh. (Applause.)

Dr. J. G. SOUTAR, in seconding the vote of thanks, said he thought everything appropriate to the occasion had already been given expression to, and the applause which greeted the graceful tribute of the President of the College of Physicians of London was an index of the response which the vote would receive.

The vote was carried by acclamation.

Prof. ROBERTSON, in reply, said he had to thank all present for the very appreciative way in which they had received this vote of thanks, and for attention given to what had been, he feared, a rather long address.

## THE ANNUAL DINNER.

The Annual Dinner, which this year also commemorated the granting of a Royal Charter, was held at the Victoria Hotel, Northumberland Avenue, in the King Edward VII Rooms, Thursday evening, July 15.

The Chair was occupied by the President, Lt.-Colonel J. R. LORD, C.B.E.

The company were received by the President and Miss Edith Lord, at 7.15 for 7.30 p.m., and the guests included: Sir George Hume, J.P., M.P., Chairman of the London County Council; the Hon. Eleanor Ritchie and Councillor Mrs. Dunn Gardner, J.P., Members of the L.C.C. Mental Hospitals Committee; the Rt. Rev. the Lord Bishop of Southwark; the Rt. Hon. Hugh Macmillan, K.C., Chairman of the Royal Commission on Lunacy, etc., and Mrs. Macmillan; A. Snell, Esq., K.C., and Mrs. C. J. Matthews, Members of the Royal Commission; Sir Arthur Robinson, K.C.B., Permanent Secretary, Ministry of Health; Vice-Admiral Sir R. Hill, K.C.B., K.C.M.G., Hon. Surgeon to H.M. the King; Sir StClair Thomson, President, Royal Society of Medicine; Sir Dawson Williams, C.B.E., Editor of the British Medical Journal; Sir Squire Sprigg, Editor of the Lancet; Professor G. Elliott Smith, F.R.S.; Sir John Collie; Lt.-Col. S. P. James, Medical Officer to the Ministry of Health; Prof. C. S. Myers, F.R.S.; Montague H. Cox, Esq., Clerk to the London County Council; H. F. Keene, Esq., O.B.E., Chief Officer, and J. Malcolm, Esq., Engineer, Mental Hospitals Department, L.C.C.; G. A. Powell, Esq., C.B.E., Clerk to the Metropolitan Asylums Board.

Letters and telegrams of apology for absence were read from the Rt. Hon. Lord Riddell and Sir Arthur Newsholme, K.C.B., Dr. F. C. Shrubsall and others, all of whom had accepted the Association's invitation to be present.

Among those invited to attend and who wrote expressing their regret at their inability for various reasons to do so were H.R.H. the Duke of York, the Lord Chancellor, the Minister of Health, the Lord Bishop of London, the President of the Royal College of Physicians, London, the President of the Royal College of Surgeons, England, and the Principal of the University of London, Lord Dawson of Penn, Lord Southborough, Lord Justice Atkins, Sir Walter Morley Fletcher, Sir Leslie Scott, Sir William Hale White, Sir Robert Phillips, Sir E. Cooper Perry, Prof. Starling, A. Taylor, Esq., M.P., Lt.-Col. F. E. Freemantle, Major W. E. Elliott, and others.

There was a large attendance of honorary and ordinary members and their guests, and the gathering was thoroughly representative of those interested in psychological medicine and the care of the mentally afflicted, and among others included several Commissioners of the Boards of Control for England and Wales and for Scotland, and Lord Sandhurst, the Lord Chancellor's visitor.

The croupiers were Dr. R. Worth, Hon. Gen. Secretary, Dr. Douglas McRae, Co-Editor, Journal of Mental Science, the late Dr. R. H. Cole, and Dr. J. W. Geddes.

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# TOASTS. "THE KING."

The President submitted the toast of "The King," and it was loyally pledged to the accompaniment of the National Anthem.

The PRESIDENT then said: My Lords, Ladies and Gentlemen,—Our Annual Dinners, the first to be held in London being at Morley's Hotel in 1843, have been ever distinguished for good fellowship, eloquence and wit. This year for the first time within my recollection song will be added, (1) which means that speeches will need to share with the newcomer the short time at our disposal. I am sure this will be welcome news to those whose duty it will be to propose and respond to toasts. We will commence with song.

#### "THE LONDON COUNTY COUNCIL."

Dr. J. GREIG SOUTAR proposed the toast "The London County Council." He said that when he was asked to undertake this function he was taken aback, and he was somewhat appalled at the magnitude of the duty. London was, in all conscience, big enough as a toast, but to deal with the rulers of London was an infinitely bigger task, and there need be small wonder that he was staggered at what was expected of him. The functions and the activities of the London County Council were so numerous and so varied that they made an appeal to every special interest. He could imagine many ways in which this toast might be approached by different bodies. For instance, if this happened to be a meeting of historians he did not doubt there would be delivered a very interesting and learned account of the history and the government of London, and the speaker might point to the London County Council as a very advanced, but perhaps not a final stage in local government. If there were a meeting here of sanitary engineers, he did not doubt that the gathering would be told there were nearly 400 miles of sewers—possibly not a very delectable subject for post-prandial oratory. The spokesman on the subject of education would, no doubt, point to the wonderful ladder that the London County Council had provided by means of which the boys and girls of London might climb, through the elementary and secondary schools and technical schools, to the university itself. But he hoped the speaker for that body would not lay too much stress upon intellectuality as being the only purpose of education. (Hear, hear.) Or this might be a gathering of architects, and the spokesman for that profession would have to be both courteous and (Laughter.) No doubt he would "let himself go" on the glories and the beauties of the County Hall, and it was very likely that he would point to the influence of artistic environment in creating that extraordinarily harmonious atmosphere which, he understood, prevailed at all the meetings of the Council. The speaker might even suggest that the County Council might occasionally loan that hall to another body when they had one of their recurrent attacks of " nerves. But perhaps he would be a little more careful and more diffident when he spoke about the new Piccadilly Circus, and the Bridge, about which a good deal had been heard of late. Or this might be a gathering of horticulturists and gardeners, and they would be able to speak only in terms of high appreciation of the very fine parks which the County Council maintained, where the poorest citizens of the land could derive a pure and sheer joy from the flowers and the shrubs, such as only the richest could provide for themselves at great cost. And so it was throughout the whole range of the work of the London County Council; there would be something which would make a special appeal to those pursuing any particular sphere of work. But for this Association, as a medical organization, all these matters of drainage, education, school clinics, architecture, finance, were but incidents-important incidents, he admitted-in the pursuit of the one great underlying purpose in which they as medical men and the Council were united, that of providing for the community the highest standard of health attainable. (Hear, hear.) If any and every activity of the Council were scrutinized, it would be found that it was based upon, and inspired by a desire to give practical effect to, the teachings of medical science. That was the Association's approach to the Council, that was where and how they and we are linked together.

<sup>(1)</sup> The "Westminster Quartette" and other glee singers have in the past sung at our Dinners.—Eds.

There was one duty of the Council which could not be passed by at a meeting of this sort. They were the responsible authority for, he believed, ten mental hospitals. It was well known what excellent institutions they were, not only as homes of refuge—asylums in the real meaning of that word—homes of refuge for the storm-tossed, they were actively living centres of medical research and endeavour. (Hear, hear.) Incidentally, he might say that the pleasure felt by the members at having Colonel Lord as President redounded to the credit of the County Council, who, some years ago, saw in him the promise of those qualities of head and heart which, in their fulfilment, had won the appreciation and high regard of his colleagues. (Applause.)

But those present could not think of the County Council without having in their minds Colonel Lord's immediate predecessor in the chair; but this was not the time to strike a note of sorrow. Sir Frederick Mott was not with us now, yet he lived, and he would live for years beyond our time, in the fruitful work he did for the benefit of his fellow beings, work which was made possible for him by the fact that opportunities were offered him and he seized them; the opportunities came in the laboratories and the wards of the L.C.C. mental hospitals. work could not have been accomplished had it not been that such opportunities were placed in his way by the London County Council. And it was to some extent through Sir Frederick that the Maudsley Hospital was established on lines which enabled treatment to be obtained in the early stage of mental disorder, in which stage, as members of the Association knew, recovery could often be quickly obtained. So confident were alienists of this, that he believed the accumulated experience of the Maudsley Hospital had helped to pave the way for a beneficial change in legislation. (Applause.) That, too, redounded to the credit, not only of the late President, Sir Frederick Mott, but also to that of the London County Council, for whom he worked so long. For the part they had played in furthering the work of the late President of the Association, and for the enlightened way in which they had given effect to the teachings of medical science, members of that Association, and the whole profession, owed a debt of gratitude to the London County Council. It was gladly acknowledged. In the still firm conviction that they would continue to be fellow-workers in the long and strenuous struggle which still lay ahead for those now active, for their successors and the successors of members of the Association in further diminishing the far too heavy burden of suffering and disability, he commended the toast to the company, and he had the pleasure of associating with that toast the name of Sir George Hume, the Chairman of the London County Council. (Applause.)

The toast was cordially pledged.

Sir George Hume, J.P., M.P., Chairman, London County Council, in responding to the toast, said Dr. Soutar had referred to the London County Council in terms much more magnanimous and complete than any he had heard before, and he had to thank that gentleman for his eloquent words, and for the good wishes he had expressed. He had undoubtedly opened before the speaker many lines of advance in making the reply, and so he might have inflicted upon the gathering a very long speech, but since he had been occupying the chair of the London County Council he had found that it was often safer to listen than to speak. Meeting such a distinguished company of people who had been devoting their lives to this very difficult line of work as was now the case, it did not behave those who had to deal with the governing side of things to say too much; they had to listen, and to help in the work which had to be carried out in the future. Some reference had been made to the condition of affairs within the Council Chamber. He was glad to say that since the meetings had been held in the new County Hall, the members generally had completely altered their manners; the only rivalry between them now was as to the speed at which they travelled. He did not think they had any reactionaries among them. They realized that the world was not standing still, and that there was great need of improvement. He was happy to think that amongst those who were working for the London County Council were distinguished officers whose names were known throughout the world, one of them having been honoured by the Association as its President. (Applause.) All he could do was to modestly retire to the rear while those who were really carrying forward the work spoke to the gathering. But he did wish to heartily congratulate the Association on having secured its new Charter, and he hoped this Royal Charter would stimulate the Association to continue in its great work, a work which had been done so efficiently hitherto; and he wished the Association every success in the future. (Applause.)

## "THE UNIVERSITIES AND THE ROYAL COLLEGES."

Dr. R. Percy Smith, in proposing this toast, said that it was necessary to mention our old great Universities in this country, those of Oxford and Cambridge. The University of Cambridge he could claim to have a small acquaintance with, because as far back as 1867 he passed the Junior Cambridge Local Examination. (Laughter.) Subsequently he went up for the Senior, and passed that too, which served him as an entrance examination when he became a medical student. had not the opportunity of going to Oxford or Cambridge, but he entered the University of London, and it was very kind to him at the end of his time. Oxford, Cambridge, London and Durham were our old universities. In his list of other universities were also Birmingham, Leeds, Manchester, Liverpool, Bristol, Bradford, and Reading. The University of Leeds honoured him by appointing him one of its Examiners. In Scotland there were the old universities of Edinburgh, Glasgow, St. Andrews and Aberdeen. A friend on his left said they could flood England with graduates from Scotland, and there was no question that many graduates from Scotland came to study medicine in London and other English towns, and we were always delighted to see them. In Ireland was old Trinity College, Dublin, the National University, and the Queen's University, Belfast, and he understood there were universities, or university colleges, at Cork and Galway, so that in that country university education was spreading. In Wales were the Universities at Cardiff and Aberystwith. All those universities produced medical graduates, and large numbers of them were students in London hospitals for a time before graduation.

With regard to the Royal Colleges of Physicians in the three countries, all those bodies had recently taken more notice of the special work of the Association than they used to do. Diplomas in psychological medicine were granted now by many At present the Conjoint Board of England granted diplomas in of these bodies. psychological medicine, and it was very encouraging that this branch of medicine should not be considered as a kind of offshoot which could be neglected. It should be recognized how important a branch it was, and how closely it was connected with general medicine and surgery. The Association was in the delightful position of having present the President of the Royal College of Physicians of Edinburgh, a distinguished member of the Association and a former President. He had also been asked to include in the toast Dr. William Brown, who represented the University of Oxford; he was the Wilde Reader in Psychology there, and he was well known as a distinguished psychologist. He understood that during the war Dr. Brown was medical officer to the hospital for soldiers who had a mental breakdown. He understood Dr. Brown's work was now pure psychology, and not the practice of medicine. The other respondent to the toast was Prof. Robertson, of Edinburgh, the President of the Royal College of Physicians there, who was known intimately in the Association. When the speaker was Assistant Medical Officer at Bethlem Royal Hospital, Prof. Robertson for some months used to go round and listen to the teaching of the late Sir George Savage friendship with Prof. Robertson began then, and he was happy to say it continued The position he had reached as President of the Royal College of Physicians of Edinburgh was one which not only reflected great honour on himself, but also on the Association. He had much pleasure in submitting the toast.

Prof. G. M. ROBERTSON, P.R.C.P. Edinburgh, in replying to the toast, said the presence of this toast on the list was an indication of the great interest that the Royal Medico-Psychological Association took in the subject of medical education. Its activities were first of all directed to the training, examination and registration of mental nurses, and thirty years before what might be termed the senior branch of nursing—he referred to general hospital nursing—had the advantage of a uniform system of examination and registration provided by the State. The Cinderella of the nursing profession—that of mental nursing—enjoyed all the advantages of this under the ægis of the Royal Medico-Psychological Association. The sphere of influence of the latter was not limited to this country, it was imperial, and extended to the Dominions and Colonies, and, through its excellent Hand-book on mental nursing, it had an influence in the United States as well.

The Association had also been instrumental in obtaining the establishment of diplomas in psychological medicine, which had been founded by the universities and the Royal Colleges in order to stimulate and improve the education of the medical officers in the mental hospitals in the special branch of medical work which they had taken up. Many members of the Association who enjoyed posts near the medical schools also gave lectures on mental diseases to undergraduates as part of their medical curriculum and clinical demonstrations at the mental hospitals to which they were attached.

The first person to give systematic lectures on mental diseases in this country, in the year 1823—that is, more than a hundred years ago—was Sir Alexander Morison, who was afterwards physician at Bethlem Hospital, an institution of which all members of the Association were very proud. He delivered courses of lectures every year in London, and also in Edinburgh. And, like the good Scotsman that he was, he delivered the first lecture in Edinburgh. Those were not the days when one could travel comfortably in the "Flying Scotsman" at 60 miles an hour -if there was no strike-nor when one could whizz along the Great North Road, if one was certain there was no "trap" along it, at even more than 60 miles an hour at certain places. Sir Alexander overcame all the difficulties and jogged along at 15 miles an hour, and he laboured for thirty years in Edinburgh, and was succeeded by Skae and Laycock and Clouston. In this way lectures on mental disease had been delivered in the University of Edinburgh for more than a hundred years continuously—a record which was not exceeded by any other medical school of the world, not even by that of Paris. It was interesting to know the source of inspiration of Sir Alexander Morison. It appeared that Esquirol-in the speaker's opinion the greatest psychiatrist who had ever lived-began to deliver lectures in Paris in 1817, i.e., two years after the Battle of Waterloo was fought. He did not expect that Englishmen were in great favour in Paris at that time, but the French had always had a friendly feeling for the Scot, and there were three distinguished Scotsmen who attended these lectures. First there was Sir Robert Christisson, who introduced in his course of lectures on mental diseases the question of criminal responsibility. Then there was Andrew Duncan, who wrote a book on mental derangement, and who helped to found a readership in psycho-There was also Sir Alexander Morison-and he wished to logy in Edinburgh. say what a pleasure it was to have present this evening his grandson, Dr. Blackall Morison. So impressed was Sir Alexander Morison with the lectures delivered by Esquirol that he himself decided to lecture, and he did so. Esquirol was a pupil of Pinel, the centenary of whose death took place in the present year, and the French alienists and neurologists were holding a special commemorative meeting at their Congress this year at Geneva and Lausanne, to which the Royal Medico-Psychological Association would be sending a representative and a special letter to congratulate their French colleagues on the great work which Pinel had done. Esquirol and Pinel were wonderful men; Esquirol was a fluent speaker and a great teacher, but Pinel was not known to have spoken four consecutive words on the subject of mental diseases, but he was a man of culture and feeling, a man of ideas and of action. The humane treatment of the insane, by Philippe Pinel, dated from the time of his appointment in Paris in 1793. It must not be thought that Pinel was the only humanitarian of that period; there was a wave of humanitarianism passing over the world. In 1788 Wilberforce formed the Association for the Abolition of the Slave Trade, four years before the Paris mob stormed the Bastille, which, according to Carlyle, was one of the most memorable events in the history of the world. In 1790 John Howard died, his life had been devoted to doing so much for those who were confined in prisons, and by drawing attention to the fact that the prisons contained many insane persons. Howard also did much for the better care and the amelioration of the lot of the insane. This year happened to be the bicentenary of the birth of John Howard, and, because of the great work he did, the speaker hoped this Association would not allow this bicentenary to pass without specially commemorating it in some way. In Paris, Florence, York and Edinburgh there were independent movements for the amelioration and the care of the insane in the early 'nineties of the eighteenth century. The epoch was indelibly stamped with the name of Pinel, but the stage on which he performed was that created by the French Revolution, on which the eyes of the civilized world were then fixed, and the scene which he enacted was dramatic. He struck off the chains with which his patients were bound. His reputation as a reformer was fully deserved, but it was of interest to note that a year before this episode occurred, namely, on March 3, 1792, William Tuke, at a meeting of the Society of Friends in York, proposed the foundation of "The Retreat"; but it was not so well known that, six days before Tuke made this proposal, the Lord Provost of the City of Edinburgh, at the instigation of one of the speaker's predecessors, Andrew Duncan, lodged a scheme for the formation of the Royal Mental Hospital at Morningside. Neither institution was opened until some years afterwards, so that neither could compete with Pinel for the beginning of the humane treatment of the insane.

Finally, with all the responsibility which attached to him as President of the Royal College of Physicians of Edinburgh, and as a former President of the Royal Medico-Psychological Association, he wished to say that, taken all round, there were no mental hospitals in any country in the world which could compare, for management and consideration for their patients, with those in this country. There might be more research performed in certain mental hospitals in Germany; there might be certain mental hospitals in America which had reached a very high standard, but not a higher standard than in this country. He repeated, there was no country in which the average level was so high as in this. He did not complain of criticism, because criticism, if taken in the proper spirit, did good. He only felt sorry for the unnecessary pain it might cause friends of patients who were treated in their mental hospitals, which were a credit to this country.

Dr. WILLIAM BROWN (Wilde Reader in Mental Philosophy, University of Oxford) also responded to the toast. He said the honour had been put upon him of answering this toast of the Universities. Dr. Percy Smith had already relieved him of the necessity of enumerating them and dealing with them serialim, for which he thanked that gentleman. He had connection with only two, and they were enough for him. One was the university which used to be looked upon as the place where one madefriends and learned to carry one's wine like gentlemen, and to conceal the fact that one did any work; in fact men did their work in the vacations, and that was why the vacations were so long. The other university, that of London, was a very different affair, because there one needed an iron nerve if one wished to get through one's exams.; it was a test of solid endurance. His friend, Prof. C. S. Myers, was here this evening and he should be answering for the Universities rather than the speaker, because Cambridge had done so much more on the purely scientific side of psychology than Oxford had been able to do. But at Oxford they considered they had done well enough. There was a man, John Locke, over 200 years ago, who founded modern psychology. He was a graduate of the speaker's college, and when he was at work there he was thought to be an awful crank; the other dons could not stand him, and at last they got rid of him. Dr. Brown had never been at a public dinner in Christ Church without some reference being made to him. So he had evidently left something behind him to impress even the students of Christ Church.

Psychology was the science he was supposed to be speaking for in connection with the Universities, but there was physiology too, and physiology was considered as of a certain importance in medicine, but not very much. When men went down from Oxford and from Cambridge to London to do their real medicine, they were urged to forget their physiology. It was advice which was superfluous, because they had forgotten it before they reached the London hospitals. He did not know whether it was true of psychology; he hoped not. It was often considered to be a sort of joke against university psychology that it was academic. He did not know whether those people were aware of what academic meant, whether they thought it was a psychology not of any particular good, which one could put aside when coming to real work. But as a matter of fact, certainly at Oxford, the kind of psychology which had been taught and studied had been of a different nature. Instead of being "academic," and behind the times, it had been ahead of the times. Certainly Prof. William McDougall, long before one knew about the new psychology, was teaching its principles at Oxford. If he, the speaker, might be allowed to make one reference to himself, he persisted in doing practical psychology as well as theoretical. Dr. Percy Smith said he, the speaker, now did pure psychology and did not practise medicine, and presumably that meant Dr. Percy Smith had not seen any patients of his. But he did practise medical psychology, and he intended to continue to do so, and if Oxford did not allow him to do so, he would cease to be at Oxford, and would come to London. Modern

psychology must be medical. If anyone was going to teach psychology in the University he must not only be medical, as the greatest psychologists had been, such as William James, Wilhelm Wundt, William McDougall and C. S. Myers and others, but it was revealing the secrets of the mind in a way that no other method of study had succeeded in doing. Psychology must be based on deep analysis of the individual.

As to the place of psychology in the university, it seemed to him that the psychology there must also be studied from the general philosophic point of view, with that sense of proportion, that sort of intellectual "good form" which avoided over-stressing of any particular line at the expense of the rest. The duty of university psychology was to see that the various movements which arose from time to time were kept within bounds, and were brought into relation with general knowledge; so that new thought, suggestion, psycho-analysis, whatever it might be, must be considered in reference to a general system. So in relation to psycho-analysis, which the Association discussed this morning, one felt that the attitude of "not a minute on, not a penny off" as regards Freud's teaching was the wrong attitude from the point of view of a University. In the end, the attitude must be the general philosophic one, as was expressed by the degree that was now given in practically all universities. The Degree of D.Ph. was given, not for special knowledge in metaphysics, but for knowledge in the various sciences from that general philosophic point of view.

He expressed gratitude for the toast on behalf of the Universities.

## "THE ROYAL SOCIETY OF MEDICINE AND THE BRITISH MEDICAL ASSOCIATION."

Dr. Bedford Pierce, in proposing this toast, said that since he attended one of these dinners he had had the privilege of a visit to America, and in connection with that an idea came to him which would have been very useful to him in his present predicament. It was contained in a story of a man who lived in the Middle West, and who was perpetually grumbling and depressed over his business and other affairs. But one morning he arrived at his business premises full of good temper and cheerfulness. His friend asked him what was the matter, and his reply was that he had a new idea—that he had decided to hire a young man to take over all his worries. The friend said, "How can you afford it if your business is so bad?" He said, "I have been thinking about that; I shall have to pay " But him a pretty good salary, and I thought about \$5,000 a year would do." "But how will you find it?" "Oh! that will be the young man's first worry." He, Dr. Bedford Pierce, wished he could afford the assistance which would help him in his present predicament, because he had to propose prosperity to two great medical institutions, and he felt himself utterly unable to cope with it, even though he had been a member of both those institutions during the greater part of his life. He wished, nevertheless, to express some words of sympathy with those who carried on the work of these associations. Speaking first of the British Medical Association, if anyone felt any doubt as to the value of that Association to the profession, he commended to him a perusal of the red book, which gave advice to young medical practitioners. He was certain that if the book were read, it would result in a desire that it be placed on the compulsory curriculum of the medical profession, as a knowledge of the contents of the book would do much to lessen pain and bitterness in professional life, and save vast troubles everywhere. He had to refer particularly to the journal. Sir Dawson Williams had to respond to the toast, and he had been assured that that gentleman must have plenty of worries. How it was possible to carry on that journal as he did, with the multitude of articles sent to him, and the prolixity of medical correspondents and writers, he could not conceive. It was a great achievement, and the profession was much indebted to him for the journal, which went to 30,000 medical families. He only hoped that the stock of blue pencils would hold good. Personally he would like the type to be a little larger and the articles more condensed. He wondered who, among those who had sent articles to the British Medical Journal, would not admit that the article could have been reduced to at least half its dimensions without loss to the profession or of credit to the writer.

He had been asked to refer also to the Royal Society of Medicine, that great body which had co-ordinated the various medical societies in London, or most of them, and seemed to have contrived to bring together the various bodies and make ot them a harmonious whole. The profession was proud of the Royal Society of Medicine, and especially proud of its wonderful Library, which, he believed, was unequalled anywhere in the world. The Royal Society of Medicine must have its penalties, and its President doubtless had his worries. When he thought of presidents of societies having to sit in a conspicuous place and listen to lengthy orations by verbose speakers, he had often deemed it unfortunate that they could not sit near the door and slip out for a cup of tea while the lecturer was demonstrating a diagram on the screen. But a president could not even close his eyes for a moment for philosophical meditation; he had to listen to it and to be intelligent through it all. Perhaps a president's worries could be lessened by a contrivance of Herbert Spencer's. When Herbert Spencer was in conversation and he found it tedious, he inserted a pair of ear-stoppers into his ears, and these enabled him to retire within himself. Perhaps the presidential table of the Royal Society of Medicine could be provided, besides the ivory hammer, with some sort of gilded ear-stopper.

The Society very gladly welcomed the representatives of these two great, learned bodies at its board, and was very pleased they had come to join in the commemoration of the granting to it of the Royal Charter. They were particularly grateful to the two gentlemen who would respond to this toast for their own individual service in the cause of the profession, and for the great work they had done to help all its members.

Sir STCLAIR THOMSON, President of the Royal Society of Medicine, in responding for that Society, said he was a throat doctor, and he had been taking a lesson in elocution from the toast-master. (Laughter.) In regard to what had been said by the proposer of the toast, he could quote a great actor, and a great artist, Mr. George Grossmith, and say, "We do not believe you." He regretted that, because the great Bacon said, "A little lie doth greatly please." However, in replying to this toast he was able to break a record. The Chairman said that ever since the year 1843 all the speeches at these dinners had been celebrated for their eloquence and wit. In breaking that record he felt very like the tourist in Italy. story were told in England, the teller must say the tourist was an American, and when telling it in America, the tourist must be described as an Englishman. tourist saw a lamp alight in front of a sacred image, and the guide said the lamp had not been out for 500 years, whereupon the tourist gave a vigorous puff and said, "I guess it's out now!" Talking of Americans in Italy reminded him of the Americans who went up to the Capitol, where they kept two wolves in a cage, in memory of the time when Romulus and Remus, who founded Rome, were suckled by a she-wolf. Some American tourists came into the hotel and said to the English visitors, "We have been up to the Capitol, and there we saw the two wolves who suckled Romeo and Juliet." (Laughter.) Sitting next to the Right Rev. Prelate reminded the speaker of another story from the same country. In Italy there was a great Cardinal named Rampolla. There was a statue in the Borghese Gardens, which showed Apollo chasing Daphne. These Americans came into the hotel and said, "We have been in the Borghese Gardens and seen a most interesting statue, which shows Rampolla chasing Daphne." Sitting in such company made him feel like the Scottish minister who, when he got into the pulpit one day, found he had come without his sermon, and he said, "My dear friends, I am sorry to tell you that I find I have come out this morning without my sermon so that the words I am about to address to you must depend upon Divine inspiration, but this afternoon I will be better provided." (Laughter.)

He did not think he had come with the least regret; quite the contrary. He agreed with our Poet Laureate in the ode where he said:

"I love to meet my fellow men at pleasures of the table;

I go to public dinners when I'm fit enough and able;

I love the talk that comes between the pottage and the peaches,

But view with a dejected mien the speeches."

Still, he was reminded of his friend, Dean Inge. The speaker asked him, some years ago, to come to a medical dinner, and said he believed the Dean had the reputation of liking public dinners. He wrote in reply saying, "It is a fact I like public dinners; I like particularly public dinners of doctors, because I love to see there is another profession besides my own which does not live up to its principles." (Laughter.) Shakespeare said good company, good wine, good fellowship can make good people. It would be seen that that good man put wine where it should be, not

at secret drinking, but at table between good company and good fellowship; and for this good company, this good wine and this good welcome, he thanked the Association, on behalf of his Society, most sincerely.

Sir Dawson Williams responded on behalf of the British Medical Association. He wished, he said, to make some further reference to the Royal Medico-Psychological Association's late President, who recently died in harness. He was a man of very exceptional qualities, whom the speaker had known practically all his life. They entered University College Hospital on the same day, and he had always been the same steady and judicious personality. Sir Frederick Mott had succeeded in introducing into the specialty of mental disease a degree of precision and a scientific atmosphere which it had not had before. He did not leave psychiatry where he found it, but made to it the most important contributions of any man of our time. He took men away from the current views on psychology to the brain, like the speaker's master, Bastian. Mott sheared away a great mass of material which was of no value whatever to psychiatry. He might not always have been right, but he was a sincere believer in science and in the possibilities of improving the human race. Probably the Chairman of the London County Council would agree that Sir Frederick Mott was one of the ablest servants that body ever had.

He was very glad he was allowed to speak for so august a body as the British Medical Association, and that the Royal Medico-Psychological Association had seen its way to meet in the British Medical Association House. He hoped that in a few years that body would be able to offer the Association more accommodation if required. The Royal Medico-Psychological Association had shown its willingness to become associated with the general practitioner and to come down from its high towers and out of its beautiful gardens, to take an active part in teaching psychological medicine to medical students, thereby enabling the practitioner to treat cases for their mental troubles in their homes, and thus in many instances avoiding certification under the Lunacy Acts. He thanked the company present for including him in this toast.

## "THE GUESTS."

Sir Frederick Willis, K.B.E. (an Honorary Member), submitted the toast of "The Guests," and in doing so said his list of guests embraced a remarkable number of distinguished names. It was a great pleasure to see at this gathering the representative of the Metropolitan Asylums Board, Mr. Powell. That body was always very efficient and helpful, and Mr. Powell was a great assistance in times of trouble. There was also present Sir Arthur Robinson, the Permanent Secretary of the Ministry of Health, which Government department he regarded as the most important in this country. He was sorry the name did not carry a reminder of its predecessor, the Local Government Board; it was still the Local Government Board, with a number of other functions Sir Arthur Robinson had had a most distinguished career. After doing very well at Oxford and joining the Civil Service and securing first place in the open competitive examination for the Civil Service, he went to the Colonial Office, and passed through one or two other offices, eventually coming to the Ministry of Health. Sir Arthur had very great sympathy with the subject of mental affliction, and when the Board of Control was in a difficulty he was always most helpful. And the company included Colonel James, who had rendered much service in connection with the treatment of general paralysis by induced malarial infection. He was the man who looked after the mosquitoes and showed how to use them to secure the proper results. Another gentleman on the list was Admiral Sir Robert Hill; another was Dr. Myers, who had done much for industrial psychology, and Sir John Collie, who was the enemy of the malingerer. Professor Elliot Smith was also present, and Sir Arthur Newsholme was to have been present. The latter was at one time the Chief Medical Officer of the Local Government Board, and was responsible for introducing a government scheme for dealing with venereal diseases. Robertson said in his Maudsley Lecture that the clinics for venereal disease which had been established had had a very important effect in reducing the amount of preventable insanity. It was also very gratifying to see the Chairman, also Mr. Snell, and Mrs. Matthews, of the Royal Commission on Lunacy. When it was first proposed to hold this Commission, the speaker had doubts as to whether it was

wise; there had been so many unfounded attacks on the lunacy system in this country that it seemed to him they were hardly worth noticing. He saw a member of Parliament who had made specific statements about the treatment of two cases. The speaker got full particulars of those cases, and convinced the member of Parliament that he was entirely wrong. He therefore asked him to withdraw the allegations, but while he admitted they were without foundation, he remarked that unless a very lurid picture were painted, the public would not be got to take any notice. That seemed to be the sort of attack which was generally made. But after watching the operations of this Lunacy Commission, under the very able chairmanship of the Rt. Hon. Hugh Macmillan, he was convinced that their work had done a great deal of good, and he wished to say how very much those concerned with lunacy were indebted to Mr. Macmillan for the way in which the inquiry had been conducted. It was known that Mr. Macmillan had reached the top of the tree in his profession in Scotland before he came to England; it was now impossible to add lustre to his name.

He had much pleasure in submitting this toast, and coupling with it the names of

the Rt. Hon. Hugh Macmillan and the Lord Bishop of Southwark.

The Rt. Hon. HUGH MACMILLAN, K.C., in responding to the toast, said that having observed the very manifest appreciation which the guests had shown for the good things spread before them by the Association's hospitality, he was glad he had to reply for the guests, not to answer for them. After listening to the far too laudatory remarks which his friend Sir Frederick Willis had been good enough to make about him, he thought that if Dr. Percy Smith had been called upon to examine him, the speaker, professionally, he would have said that his state was one of combined aphasia and exaltation—aphasia due to his inability to express, in appropriate terms, his gratitude for the kind remarks; exaltation because of his great appreciation of the kindness shown. Sir Frederick had made observations about the work of the Royal Commission, but he had not seen the Report—(Laughter)—and he would like to state that he, the speaker, had booked a passage to Canada next month, in order that he might escape from the consequences of his temerity, as a mere Scots lawyer and layman, in invading a domain which was the peculiar province of this gathering of experts. But he was glad to have the opportunity, in the presence of the Royal Medico-Psychological Association, of saving how deeply indebted he was, as Chairman of this Royal Commission, and how indebted his colleagues were too, to the medical profession, and particularly to those who practised this special branch of medicine, for the very great help they had received. When the post of Chairman of the Royal Commission was offered to him he first disclaimed his suitability for it, on the ground that he was quite unfamiliar with the subject; but he was assured that he would at least have the advantage of bringing to the subject an entirely open mind. He was sure the Report of the Royal Commission would not give general satisfaction; it would give no satisfaction to the Member of Parliament to whom Sir Frederick Willis had referred. But it could be accepted as a sincere effort to assist those concerned in the great and noble task to which the members of their Association had devoted their lives; and if in the slightest degree the Commission had contributed to a better appreciation of the problem and of the great services which had been rendered to the afflicted by those he saw around him, he would feel, after all, that the Royal Commission had served one useful purpose. He did not wish to be too serious, and he did not feel very serious, because he had been having a most delightful evening in very delightful company, and he thought the assembly had reached the stage when they ought to hear a Scotch story. the vicinity of Aberdeen was a factory where easy Scotch stories were prepared for the English market. The most select vintages were, of course, kept for home consumption, but it would be interesting to try a few of the more recent products of that manufactory upon an English audience. A certain Englishman had a shooting in the Highlands. Returning there in the autumn he went down in the morning to see his gillie. He said to him, "Well, Donald, how has the world been treating you?" "Very seldom, sir," was the answer. (Laughter.) The appreciation given to that deserved another, a little more difficult. Dr. Percy Smith had referred to the number of Scotsmen who came to England and prospered. It was commonly said that they never returned to Scotland, but that was a mistake. He, the speaker, read recently of a Scotsman who had returned to Edinburgh. It was true that the intelligence was derived from the Police News,

the paragraph stating that at the Edinburgh Police Court a certain Scotsman had appeared on a charge of travelling from London without a ticket; but it was a relief to observe that the amount of the fine was £2, and accordingly he was £1 10s. "in" on the transaction. (Laughter.) He wished the company to appreciate that despite the ordeal he himself had recently passed through, he yet remained human and was still uncertified.

On behalf of the guests he most cordially thanked the Association for its hospitality.

The Bishop of Southwark also responded, in a brief speech, thanking the hosts for their kind hospitality.

## "THE ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION."

Sir Arthur Robinson, K.C.B., submitted the toast of "The Royal Medico-Psychological Association." He said he understood that the Association was formed in 1841 by six gentlemen, who conceived the idea while drinking their wine at a tavern.\* Imagination was aroused by considering the extraordinary number of valuable reforms which had sprung from those gentlemen drinking together, and he supposed they formed some conception of what was in the womb of the future, though they could scarcely have conceived of such an association as that of which he submitted the toast with its membership of several hundreds. and its Royal Charter, with its standing as the recognized authority in this country on this special branch of medicine, with extensions which were world-wide. Those seven gentlemen evidently "builded better than they knew." The Association was going towards its centenary, full of influence, power and wisdom, and he came to-night, on behalf of his master, the Minister of Health, to wish the Association every success in its great task. As a layman, the great advance seemed to have been that the Association had established the fact that this mental hygiene or psychiatry must be linked up with the rest of medicine and with the rest of public health. It lived and progressed more and more as that linking up was made closer and more intimate. That was why those at the Ministry of Health in the midst of its preoccupations as to West Ham, housing, national insurance, the Poor-law, and the 34 subjects which were discussed in the House of Commons the other night, were compelled to, and did, take a real living interest in the work of this Association. The Ministry must largely depend on the co-operation of those outside it for advice and help, and the more it could procure that, the better it would do its work. The Ministry knew that this help could be relied upon. This was a time when a very large advance in this matter was about to be made. The Report of the Royal Commission was coming, and was now very near. Mr. Macmillan had said people did not know what it was; what they did know was that a Commission presided over by Mr. Macmillan with a skill and ability which the speaker had never seen equalled in all his experience—(Applause)—was bound to mark a great advance in this matter. It was for the Commission to make its recommendations, and it was for the Ministry, in due course, to promote legislation in Parliament to carry them out. He expected the Report to mark an epoch.

He asked the company to drink the health of the Royal Medico-Psychological Association, coupled with the name of its President, Lt.-Colonel J. R. Lord.

The President, responding to the toast, said that it was seldom a general meeting passed without striking a key-note for future activities. This year it had been a key-note difficult to avoid, even if he had desired to do so, for a closer union between psychiatry and the general body of medicine was a subject on many lips, and in London some very definite steps were likely to be taken in that

<sup>\*</sup> There is real foundation for this, for four of them, when on their way to another medical gathering, met socially the other two at Gloucester, and arranged the preliminaries for the formation of the Association. In a similar connection it is interesting to note that on June 13, 1750, Dr. Thomas Crow, Mr. William Ponting and four other gentlemen met in a tavern in Exchange Alley, London, and drew up an appeal for the foundation of St. Luke's Hospital.—Eds.

direction in the near future. He would revert to this subject later. In the meantime he would say that the full-dress debate on psycho-analysis he had thought it wise at this juncture to organize, had been a complete success. It had been carried through with mutual goodwill and respect for each other's view points by the various speakers, all of whom seemed to know a good deal more about the subject than on the last occasion the Association debated it. People who knew their subject well were not so likely to become heated and quarrelsome as those in whom ignorance roused feelings of inferiority, which called for compensatory efforts of a disagreeable character. That reminded him of the advocacy of rigid self-determinism by psycho-analysts, and the not very convincing examples given in some of the text-books. He thought he could improve on them. He lately directed a secretary who was helping in the emergency of organizing that meeting to type the following written message: "I am glad you are taking a widish view of the problem (psycho-analysis)." It was addressed to Dr. Potts, the opener of the debate, and that gentleman would rightly have demanded an explanation had he received the message as actually typed by the secretary, which was-"I am glad you are taking a modest view of the subject." Many thought the theories of Freud not merely immodest, but indecent, so he asked why did the secretary unconsciously suggest this view-somebody, too, who knew nothing of Freud or psycho-analysis? (Laughter.) The speaker gave other curious incidents of the same description, mentioning that he had put it in his notes to refer to Dr. Goodall's eloquence—that poem in prose they so well remembered at the last annual dinner held in London—advocating the mental clinic at the general hospital, as his "Swan-song." Obviously according to the psycho-analyst this was done unconsciously, as he did not agree that these clinics were an immediate panacea for the settlement of the problem of the proper treatment of occurring mental disorder. (Laughter.)

They had listened to many excellent speeches that night, and he feared that he, the speaker, was too tired to attempt to compete with them. Thomson in his speech said that he was about to break a record, i.e., the record for eloquence and wit the Association had when it dined. Well, Sir StClair had failed to restrain both his wit and eloquence, especially the former, and instead of breaking a record he had enhanced it, to their great enjoyment. President hoped Sir StClair would continue the attempt at future dinners of the Association with the same result. Sir Dawson Williams, on the other hand, complained he had had no warning that he had to speak, and could not therefore be expected to say anything worth listening to, but just as he, the speaker, often dreamed that he was about to be hanged and awoke with joy and thankfulness that he was not, so Sir Dawson Williams could at once bless his star that his speech, begun so gloomily, had delighted the assembly by its sincerity and lofty ideals, and he, the speaker, could assure him no one was a more welcome guest at that festive board than the Editor of the British Medical Journal, especially so when a brother editor presided. The President went on to say that he had come prepared to speak to them of the future of psychiatry in this country, but he felt bound to limit his further remarks because the happy evening was so advanced, and that day's proceedings for the first time during the week had tried his strength severely, so he would conclude what he had to say as briefly as possible.

He was grateful personally, and on behalf of the Association, for all the kind things Sir Arthur Robinson had said. He felt that there was a hopeful note about the things Mr. Macmillan had said about the Report of the Royal Commission on Lunacy, which was being looked forward to with the greatest interest. On looking through the minutes of the meetings of the Royal Medico-Psychological Association he read that at its first meeting, at Gloucester Mental Hospital, those seven worthies who founded the Association passed this resolution: "That by members of the Association the terms 'lunatic' and 'lunatic asylum' be abandoned, except for legal purposes, and the terms 'insane person' and 'hospitals for theinsane' be substituted." Theincubus of the former terms was being felt even in those early days, but nothing had been done as yet in answer to their prayer. He hoped the coming Report would, among other reforms, lay these old terms finally to rest, and incidentally the spirits of those six worthies of over half a century ago. In regard to the future, while Colonel Goodall dwelt on the mental clinic at general hospitals as being a bright particular star upon the psychiatric firmament, he, the speaker, looked to the earth, and some would say below it, for a remedy

for the existing state of things in regard to the proper treatment of mental disorders. He felt that reciprocity and affiliation between mental and general hospitals and a better focussing of the already existing psychiatric forces must come first, and then it might be possible on the experience thus gained to build up an enduring general hospital mental clinic service, to which our present public mental hospitals would be a very necessary adjunct. That was the best way of solving this problem. To commence building from the highest point and work downwards was enough to make Bacon turn in his grave. What was needed was to build up from the materials available, and they had not yet consolidated at the first stage, which was to teach the subject to general practitioners, which meant that medical students should be trained to view their patients as thinking, feeling and behaving individuals, and not as soulless subjects of systemic disorders. Also public mental hospitals must be brought to a pitch of high efficiency of clinical work, for which affiliation and reciprocity with general hospitals was very necessary. The work of the psychiatrically educated general practitioner and consultant should be linked up with the clinical work of the public mental hospitals. They could then go to the general hospital, and hand in hand there conquer a field of psychiatry yet untouched, and over-ripe and ready to be garnered. He was very grateful for the kind words which had been said of the Association and its work. They lived in hopes that the time was near when much they had longed for and prayed for would materialize, and that Parliament would find in the recommendations of the Royal Commission lines of progress which would in a large measure abolish the many handicaps psychiatry had ever suffered from in this country. (Loud applause.)

Mr. Victor Marmont directed the musical programme and presided at the piano. Other artistes were: Miss Lily Myers (mezzo-soprano) and Mr. Norman Long (in song and story at the piano). The dinner was tastefully cooked and expeditiously served, and the arrangements, which were extremely satisfactory, were carried out under the personal supervision of the Catering Manager.

## MORNING SESSION .- FRIDAY, JULY 16.

In the Great Hall of the British Medical Association House.

The President in the Chair.

## PAPER.

Some Forensic Aspects of Epilepsy, by Dr. W. NORWOOD EAST (vide p. 533).

## DISCUSSION.

The President said that again those present had heard a very interesting and important paper, and he was sorry it had been necessary to place this contribution so late in the week's proceedings. Perhaps at another meeting it might be possible to have a special discussion, not on criminal responsibility, as that subject had been talked rather dry of late, but on other mental aspects of crime, as it presented itself in Courts of Justice, medico-psychologists had to do with from time to time, and there was also the objective of helping one's colleagues in the prison service. He was sure the views of members expressed at such a discussion would have weight with the legal authorities. To him epilepsy was an entrancing subject, and at an early time in his psychiatric career it had occupied a good deal of his attention. At Hanwell, as a junior medical officer, he spent days and nights in the wards observing epileptic patients. The question was whether the term "epilepsy" was not used in too wide a sense. Bevan Lewis called it the fulminating psychosis. Surely the idea underlying that was something different to those outwardly calm states of mind in which people did apparently unconsciously both ordinary and extraordinary things. Would it clear up much confusion if it were decided to exclude such purely passive mental states from the category of epilepsy? "Falling sickness" was the old name for idiopathic epilepsy, and, strictly speaking, it was only associated with motor convulsion or explosive actions or sudden commotions of mind, all invariably affecting consciousness and memory. He felt it was impossible now-a-days to so limit the use of the term "epileptic," and he would later explain why. His interest in epilepsy lay

in this fact—that in observing epileptics very closely one seemed to trace in many cases, as they came out of a fit, the gradual development of perfectly co-ordinated and purposive movements. As the convulsions ceased there was a gradual slowing down of motor activity and the adoption of ordinary every-day movements, even though the patients were still unconscious or largely so. The question arose as to whether the fit did not commence in the reverse way, the onset of the tonic spasm being too sudden for it to be recognized. Then it was thought that the portions of the cerebral mechanism which had to do with all these purposive movements might be the areas in which the condition started, and the idea was to watch the development of the fit, and try to identify the first muscles to be affected, or the first action taken. He collected a large number of observations, and from them he had tried to build up a theory of epilepsy, but utterly failed in any case to localize any cortical area as the starting-point. From the character of the symptoms as a whole it would seem to be more of a cortical than a basal disturbance, but the extent the latter was involved would alter the clinical picture considerably. He thought that in essentials epilepsy was a psycho-physiological or a psycho-neural disorder, and that ordinarily it suddenly broke loose in physiological or purposeful motor activity, but of so fulminating a character as at first to constitute a tonic muscular spasm passing into convulsions, that stage being preceded by either sudden paralysis, or sudden activity rapidly passing into paralysis, of the psychic counterpart of the motor activity. As a preliminary to a return of psychic activity, purposeful movements were resumed. The brief psychic activity preceding the paralysis of mind might be of a dangerous kind and lead to an act of violence. On this assumption it was not impossible to conceive of an epileptic origin to the occurrence of an automatic state in which the patient was quiet and orderly, but lacking very largely in initiative and invention. Here there was merely activity at a physiological or neural level without consciousness, the psychic counterpart being inactive. It was a deeper dissociation than the operation of the unconscious mind. If attacks of that character occurred in a person who from time to time exhibited true fulminating epilepsy, it was right to assume a connection between them if the automatism was sudden in origin or associated with a fit. If otherwise was one justified in assuming that the automatism was of epileptic origin? He thought that automatism was always a dissociation at the psychic and physiological levels of behaviour: the greater the dissociation, the greater was the loss of consciousness and of memory. The suddenness of origin was an important factor: the more sudden, the deeper the loss of consciousness and of memory. Also the type of behaviour in the automatic state depended upon the depth of the dissociation. The automatism of dementia increased with the dementing process, but the course was slow, constant and progressive and never a fulminating one. In epilepsy automatism often occurred suddenly without reference to a fit and the conduct was excited, animal-like and emotional, which suggested an over-involvement or letting loose of basal activity. But an epileptic might pass into an unconscious and automatic state and behave quite normally, or at least pass for normal, for a long period. It was possible that in every such case some shreds of consciousness remained to direct the conduct. This was shown by the fact that in some cases on resuming the normal there was found some little memory of the incident. To return to the first question he had put. Should the term "epilepsy" also include purely mental disorders associated with unconsciousness and automatic conduct but without the presence of pdi or grand mal? Was it not true that some hysterical people also suffered from epilepsy, and epileptics from hysteria? Were not such cases, which undoubtedly occurred, labelled one or the other according to which symptoms predominated? It was commonly taught that the two conditions were entirely different, but he, the speaker, was not of that opinion. The occurrence of automatism in both was a link between them and pointed to a similar psycho-pathology. Hence the frequent occurrence of the two conditions together. The other assumption was that automatism was always hysterical in origin, and when it occurred in an epileptic that epileptic was also hysterical. This would leave epilepsy free to be thought limited to fulminating disorders with unconsciousness, either mental or physical, or both. He thought this latter assumption unsound and failed to explain the clinical symptoms. In his view, the only rational conclusion was that automatism, which was not degenerative, and not associated with definite hysteria, was always epileptic in origin. Perhaps quite unscientifically he divided dissociation

into two categories—horizontal and vertical. The former was a loosening of the connections between higher and lower functional levels of the nervous system—in other words "automatism"—and occurred in epilepsy, hysteria, dementia and some poisonings. The latter was not automatism, but a splitting of the personality, and distinctive of hysteria and not of pure epilepsy. In any case a severely impairment or absence of conscious directing force rendered the patient irresponsible to the law for his behaviour. An interesting point was whether it was necessary to prove the co-existence of the cause—say epilepsy, hysteria, etc.—to establish the existence of automatism. He, the speaker, thought it was, as he did not think that automatism was a disorder in itself, but a symptom of some underlying and causal condition.

Dr. M. ABDY COLLINS said he had had some experience of epilepsy from the clinical point of view. The President said he thought the term was applied too widely. He, however, was inclined to take the other view, because there was no doubt that some of these states did occur in the pre-epileptic state. He only doubted if it was necessary to have such a term as larvated epilepsy, or its equivalent. Did not these conditions follow a very slight attack of petit mal, or were they not the condition which usually preceded the fit? Perhaps the energy which usually resulted in a fit might be released in some other way. He very well remembered two cases. One was that of a girl, who was a source of constant trouble because she declared that all the other patients in her ward hated her and attacked her unnecessarily. They also disliked her intensely because she had a habit of suddenly turning on people and damaging them severely. She, of course, denied that she ever began any of those things. On one occasion he was visiting the ward at dinner-time and saw this patient suddenly turn round and put her finger-nails into the next patient's face and into her hair, and if he had not been there it was obvious that when she came round she would have found everybody else attacking her. He extracted her fingers from the hair of the other woman and laid her on the ground, and she was unconscious and behaved as a patient would who had a slight attack of petit mal. But it had not been noticed before, because it had always resulted in two or three people seizing her and fighting with her, and she was fighting when she recovered; but there was no doubt that she was unconscious, and that what she stated about other people attacking her was what she recollected. It looked as if she had turned round in a spiteful way and attacked others. But she was unconscious.

He had seen a similar thing occur in a boy; he had smashed things, and was never noticed to be in a fit; but in that case also on one occasion the speaker saw it happen, and put him on the floor, and he behaved as if he had a petit mal attack. And he had known patients who had forgotten; they had made arrangements for a nurse to spend money for them, then deny the whole thing. He had seen an epileptic behave violently, and on talking to him afterwards one concluded he did remember something of what happened, but mixed it up with something

Another point about automatic action was the way the people tended to repeat the same thing, and not only purposive actions. Among his patients was an ex-soldier who was subject to acute confusion. Generally about midnight he got out of bed, went to the door of the padded room, and turned out whoever might be in it—he was a very strong man—then returned to the ward and went to bed. On the next day he was in a condition of extreme confusion.

With regard to psycho-neuroses, etc., it was very difficult to say where these began. In his hospital there was a girl who was always said to be a case of hysteria; but, after some time, he felt convinced that what she had were very slight petit mal attacks, and that the other symptoms which arose afterwards, and which would be considered manifestations of hysteria, occurred in the post-epileptic state, and were very limited in the length of time they lasted. His view was that that patient was an epileptic. He did not know that one could distinguish between the two conditions; he did not know whether all forms of suddenly recurring attacks such as he had described should not be classed as epilepsy. He was not saying it was known what epilepsy was, but there were a large number of conditions in which this constantly-recurring state happened, and they might be explained by mental conditions. There were others which could not be so explained.

Dr. Bedford Piercs said he felt the Association was to be very much

congratulated on having such an exceedingly lucid and instructive paper on this very difficult subject. He had rarely heard a paper in which matters were presented so clearly and in so interesting a way.

With regard to the problem as to what was the essential nature of epilepsy, he was old-fashioned enough to think members would do well to stick to the old doctrine that there was no epilepsy without a temporary period of unconsciousness; and though he was aware there was a modern psychogenic school who professed to treat epilepsy successfully, and who would weaken this doctrine, or make light of the period of unconsciousness, and spoke of clouding of consciousness, etc., he could not but think it would be well to reserve the term "epilepsy" for a disorder in which there was a temporary period of unconsciousness and a temporary loss of memory. Those who had read Prof. Pearce's recent book on Remembering and Forgetting would have seen that the subject of memory was a perplexing one, and that it was very difficult to judge whether a person could remember a thing or not.

Concerning the question of automatic acts, he gathered that Dr. East suggested there could be true epilepsy without fits, automatic acts being the only symptom. In one of the cases related that seemed to have been the case. No doubt it was a very difficult subject. One knew of hysterical fugues, in which people did a number of strange and peculiar things, wandering about, etc., in which there was no question of true epilepsy; and when one went into the real history of the case and the underlying cause, one found states of extreme mental distress, and when the mental distress was removed by appropriate discussion and therapy, the automatic wanderings disappeared, and he did not think that could be looked upon as epilepsy.

Another thought occurred to him. He had been very much distressed at the repeated conflicts of medical and expert opinion in cases of this kind, and thirty years ago it was urged that there should be a conference of experts to agree upon matters of a technical nature, prior to the trial, so that such unseemly discussions should not take place in public. He wished that was possible. Most members knew that when they appeared in Court, lawyers pressed them to say more than they wished to; only partial facts were given, and there was much suppression of truth in cases presented to the expert. It would be wise, he thought, for the medical profession to present a united front against this suppression of facts, the requirement being laid down that all the facts should be presented, and a considered opinion arrived at by both sides as to what were the essential facts in the case, all those facts being stated before the witnesses. Something of the kind was necessary in the interests of justice, as well as in the interests of their own profession.

Dr. Tylor Fox said the crux of the matter seemed to be as to whether epileptiform automatism was always followed by complete amnesia. One could solve that by saying if the amnesia was not complete it was not true epileptic automatism. Short of that, one was bound to get into difficulties. If one took a series of cases of apparently automatic acts of the seeming nature of epilepsy, he did not doubt that a percentage would be found to have some memory of acts which followed the fits, especially in cases in which the patient had been at all violent. Violence in post-epileptic automatism might, he took it, be due to obstruction. The more the patients were left alone, the less violent they would be. obstruction of automatic acts caused a partial return of consciousness, and consequently there was not complete amnesia. It would simplify many problems if the definition could be accepted that epilepsy was a disease characterized essentially by periodic loss of consciousness, and that without loss of consciousness there could be no epilepsy. The only way that the definition could be squared with the facts would be by assuming that in certain cases the loss of consciousness was so momentary that it could not be detected, and perhaps that was a gratuitous assumption.

The President said he would like Dr. East to get together some headings for a discussion on those matters which Dr. Bedford Pierce and others had touched upon; it would help colleagues in the prison service, and be of service to general practitioners when they had to appear as witnesses in police-court cases.

Dr. East, in reply, said that when he was asked to read a paper before this meeting, there were two excuses which he thought one might offer for doing so. One was that he might have something new to say. That, he knew, was out of

the question. The other was that it might be the means of himself learning something which might be of use to him, and to other men who were working in the same field. The discussion to-day had not been wasted, as far as he was concerned, and it had emphasized what he was already aware of-that it was a subject of extreme difficulty. One of the objects he had in writing the paper was, that having been giving evidence in criminal courts for many years, it seemed to him extremely unfortunate that, over and over again, he was in conflict with the expert on the other side, and very often when it was quite unnecessary. And an observation which was warranted was that the medical man on the other side was not in every case an expert; often he was a very young general practitioner. In criminal work the difficulty was to get at the facts, because it was the commonest defence of a man, when he had committed a crime, to say that he did not remember anything about it; it was also one of the symptomatic facts about automatic actions. If it were true, it went a considerable distance in helping one to form a diagnosis. As the President said, one of the greatest difficulties seemed to be to draw the line between epilepsy and other dissociations. In one of the instances given in the paper, he, the speaker, thought one was dealing, not with an epileptic case, but with one of hysterical dissociation. And in that case he was particularly careful, in giving evidence, not to say that it was of an epileptic character, because it might have led to awkward questions in cross-examination.

He understood Dr. Collins to say that cases of epileptic furor did not remember the acts they committed while they were in that condition. He would hesitate to draw a lance with Dr. Collins on that point, but he remembered a case in which the man did seem to have a recollection of events, and a very detailed recollection. But he, the speaker, was not there, whereas in the cases Dr. Collins mentioned he was present and was able to corroborate them. That was a difficulty which could not be surmounted in criminal practice, and it was also one of the difficulties in dealing with the fact whether or not there had been any antecedent convulsive attack, or anything suggestive of minor epilepsy. These crimes if witnessed were nearly always committed in the presence of people who were ignorant of psychological problems. Hence the information was never complete.

The question of whether these cases were epileptic or not was one of very great importance. It should not be the intention or the desire of the medical man to suggest to people who had committed a crime a mental invalidism which, in fact, did not exist. If the profession was going to make mental invalids of those who were not so, then no benefit was thereby done either to the persons or to the profession or the public, because the more a sense of responsibility could be got into the individual, particularly when dealing with psycho-neuroses, the more were such persons likely to help themselves. He would protest against one remark during the discussion—that post-automatic crime was due to the resistance offered to the patient. In certain cases of murder and other crimes of the kind no violence was offered to the accused, and he did not think that crimes were due to resistance offered to the supposed epileptic while in the condition of automatism.

He had purposely avoided referring to the question of criminal responsibility, as it was a very hoary question, and little progress seemed to be made with it. But if progress could be made on the subject of automatism it would be very valuable, and would assist, as he had every hope it would, in diminishing differences between expert witnesses.

## VOTES OF THANKS.

Dr. M. J. Nolan proposed that a cordial vote of thanks be tendered to the Chairman of the London County Council for permitting the Association to meet in the County Hall, and for affording members facilities for visiting the Council Chamber, the Laboratory and other departments, as well as for their kindly courtesy. It was evident that Sir George Hume was pleased to see them and was interested in their work, and that was in a measure due to the association of the President with the London County Council.

He thought thanks should also be tendered to the British Medical Association for their courtesy and assistance during the meeting.

He therefore moved-

"That a hearty vote of thanks be accorded to the London County Council for the privilege of meeting at the County Hall on July 14 (afternoon session),

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to the Chairman of the Council, Sir George Hume, J.P., M.P., Mrs. Dunn Gardner and other members, and also the Officers of the Council for receiving them, and to the Officers who so kindly entertained them and rendered the visit both instructive and pleasurable."

"That a hearty vote of thanks be accorded to the Officers and Employees of the British Medical Association for their courtesy and assistance during

the eighty-fifth Annual Meeting now concluding."

Finally, a word of thanks was due to Dr. Edwards for his work in connection with procuring for the Association the Royal Charter, its Coat-of-Arms and new Seal. Some members were well aware of the immense amount of labour which was involved in bringing these matters to a successful conclusion.

Dr. Bedford Pierce seconded, remarking that members highly appreciated all that had been done, and that few members realized the amount of work Dr. Edwards had done in connection with the Charter and the other matters, and he hoped it would be recorded.

The vote was carried by acclamation.

## AFTERNOON SESSION .- FRIDAY, JULY 16.

At the Horton Mental Hospital, Epsom, Surrey.

The PRESIDENT in the Chair.

A demonstration was given by Col. S. P. James, M.D., Medical Officer and Adviser on Tropical Diseases to the Ministry of Health, and Member of the Malarial Commission, and Mr. P. G. Shute, Gold Medallist of the College of Pestology, of the Ministry of Health, illustrating the infection of mosquitoes and other points relating to laboratory work in connection with malaria and with the treatment of general paralysis by malaria. Clinical demonstrations on the same subject followed by Dr. W. D. Nicol, Medical Officer in Charge of Horton Malarial Treatment (G.P.I.) Hospital.

The President, in introducing Colonel James, said that psychiatry was deeply in the debt of that distinguished specialist in tropical diseases, especially malaria, for the encouragement and valuable assistance he had given as to the technique of the treatment of general paralysis by artificially induced malaria (direct mosquito infection). They had at that hospital a research and experimental centre in charge of Colonel James, from which was radiating knowledge likely to be of world-wide importance, not only as regards the cure of general paralysis, but also of the prevention and cure of malaria itself. He, the speaker, was anxious that the problem as to how malaria cured general paralysis should be solved as soon as possible and so remove such treatment from an empiric to a scientific basis in the case of this and allied mental disorders.

The important point at the present time was not the number of cases treated and the results, but the intensive study, both clinically and by laboratory methods of individual cases, and for this purpose only a few cases could be undertaken at one time. The experimental and treatment hospital they would presently visit was only for 14 patients, but it was complete as regards nursing and equipment for its purpose.

Colonel James then gave a brief account of the research work already accomplished in this matter, and indicated some epidemiological conclusions which seemed justified by the results obtained.

## Epidemiological Results of a Laboratory Study of Malaria in England. By Lt.-Col. S. P. James, M.D., I.M.S. (ret.).

The official arrangement in England by which general paralysis and other mental diseases can be treated by a course of malarial attacks induced by the bites of infected mosquitoes, provides an opportunity of studying in the laboratory certain factors which are important in connection with the epidemiology of malaria. It has fallen to me at the Ministry of Health to infect mosquitoes for the purposes of the treatment and to induce malaria by their bites at mental hospitals in different parts of the country. To assist in this work, Col. J. R. Lord, C.B.E., Medical Superintendent of the Horton Mental Hospital, Epsom, with the approval of his Committee, arranged to set apart an isolated block of

the hospital for the treatment of patients and to place a laboratory at my disposal in this block. I take this opportunity to thank him for these and other arrangements which greatly facilitated our task. Dr. Nicol was in medical charge of the patients who passed through the course of treatment at Horton during the two years with which this report deals and also collaborated with us in the laboratory and clinical studies.

The work may be summarized as follows:

- r. The practical object is the continuous supply of mosquitoes for inducing a pure infection of benign tertian malaria in patients to be treated.
- 2. Between December, 1923, and April, 1926, for the purpose of obtaining supplies of infective insects, twenty-two batches of Anopheles maculipennis were fed on patients whose blood contained gametocytes of Plasmodium vivax, and were incubated in a saturated atmosphere at 22°-24° C. for ten or more days. A successful result was obtained with sixteen batches.
- 3. About 3,200 female maculipennis (caught as adults in nature) were used in the twenty-two batches, but only about 715 of them lived long enough to be available for infecting new patients.
- 4. During the period referred to 221 patients were subjected to their bites (some on more than one occasion), for the purpose of inducing malaria. Of these patients 169 developed benign tertian malaria within the usual incubation period of the disease, and 52 failed to do so.
  - 5. The following statement gives details of the above information:

Serial number of the batch.	Month and year.	Number of mosquitoes with which batch was commenced.	Number of mosquitoes ultimately available.	Percentage infected (sporozoites in gland) when used for infecting patients.	Number of patients bitten by mosquitoes of the batch for inducing malaria.	Number of patients who developed malaria.	Number of patients who failed to develop malaria.
	Dec., 1923 .	80	12	25%		0	•
2	JanFeb., 1924	100	40	100%	3 12	9	3 3 2
3	March, 1924 .	60	2	100%	3	1 1	3
4	April, 1924 .	60	6	100%	3 2	2	o
5	May, 1924	80	2	100%	ī	ő	1
6	June, 1924 .	200		200 /6	1 _	_	
7	June, 1924 .	58		_			_
8	August, 1924 .	400	120	100%	14	14	0
9	FebMar., 1925	200				1	_
10	April, 1925 .	100			ł <u> </u>	_	
II	May, 1925 .	. 80			_		l
12	May, 1925 .	80					l —
13	June, 1925 .	80	40	80%	1	İ	0
14	June, 1925 .	60	30	100%	17	17	1
15	July, 1925 .	200	40	100%	14	14	0
16	August, 1925 .	300	150	100%	16	16	0
17	SepOct., 1925	200	50	100%	27	26	I
18	NovDec., 1925	300	40	20-85%	36	10	26
19	January, 1926.	100	40	100%	36	22	14
20	March, 1926 .	180	28	100%	11	11	0
21	March, 1926 .	225	100	100%	25	23	
22	April, 1926 .	8o	15	100%	4	4	0
		3,223	715		221	169	52

During the course of the routine work just summarized, we have made some observations on the factors which are concerned in the transmission of malaria from man to mosquitoes, and from mosquitoes to man, which are important both because they facilitate the work itself, and because they can be applied to assist

in solving problems of endemic and epidemic malaria in nature. These observations may be described very briefly as follows:

# I.—FACTORS RELATING TO THE TRANSMISSION OF MALARIA FROM MAN TO MOSQUITOES.

Our most important observation on this subject is that it is difficult to bring even a few members of a large brood of mosquitoes to a condition in which they will be successful transmitters of malaria. The difficulty is due to a number of causes, of which the following may be mentioned:

- 1. The human source of infection.—One of the chief causes of failure to infect Anopheles is the difficulty of finding a malaria patient who is infective to those insects. It is surprising what a small proportion of patients who suffer from malaria are infective to Anopheles, even when their malaria has been allowed to run its course for a considerable period. Quite rarely one comes across a patient who is strikingly infective, but our general experience is that the great majority of patients must be classed as being "poor infectors of Anopheles" and a small minority as being "good infectors."
- 2. The numbers and character of the gametocytes.—In first attacks of benign tertian malaria contracted by the bites of mosquitoes we have never found gametocytes in thin films of blood taken before the seventh day after the first rise of temperature; and our feeding experiments show that about three more days must elapse before the gametocytes become infective to Anopheles. This means that a patient in a first attack of malaria does not become infective until at earliest the tenth day of his illness. In relapses, however, gametocytes are present much earlier, usually, indeed, on the first day on which the occurrence of the relapse is reported.

There are great differences in the numbers of gametocytes found in the peripheral blood of different cases of malaria, and considerable differences in the number present in the blood of the same patient from day to day. The number rises rapidly at the beginning of the second week of the illness, and sometimes falls during the third week. We do not attach so much importance to the number of gametocytes as we do to their quality, for we have had many failures to infect batches of mosquitoes when the number of gametocytes present in the patient's blood was considerably in excess of the often-quoted figure of 1 per 500 leucocytes (12 per c.mm. of blood).

- 3. The number of feeds on infective blood.—This is one of the most important factors in the infection of Anopheles. We find that, unless an "exceptionally good infector of Anopheles" is available, it is quite necessary to feed a batch of mosquitoes several times upon the malaria case in order that the batch may ultimately become infective (sporozoites in the salivary glands). The infection of maculipennis after one feed upon an infective case is quite uncertain, and we are sure that, in some individual mosquitoes of different batches, young zygotes which have begun to grow well may cease to develop and may gradually become absorbed without coming to maturity. We have had to discontinue more than one batch which, on the third day, showed a high percentage of infection because by the eighth or ninth day all dissected individuals were negative. We cannot offer any other explanation than that its zygotes failed to continue their development and disappeared. As a result of many trials we have come to believe that mosquitoes which at first seem refractory to infection can be forced, so to speak, to become infective by repeated feeding on a suitable case.
- 4. Influence of temperature, humidity and season.—In our experience the best results in infecting A. maculipennis with P. vivax are obtained at temperatures between 22° and 24° C., and in a saturated atmosphere. We have not found any difference between the infectibility of maculipennis at different seasons of the year or between the infectibility of "hibernating" as compared with recently hatched insects.
- 5. Influence of growth of eggs.—Mosquitoes carrying nearly ripe eggs do not suck nearly so much blood as do mosquitoes with undeveloped ovaries. Thereason is that the swollen ovaries fill the abdomen and press against the midgut of the mosquito to such a degree that its cavity is almost obliterated. Therefore mosquitoes with fully developed ovaries are not likely to become heavily infected. Indeed, we find that as regards some female mosquitoes in this condition, the

blood does not pass into the midgut at all, but fills and distends the œsophageal diverticula. Examining such a female after it has fed one sees that there is red blood in the abdomen, and one concludes that the insect, having fed on the infective patient, will itself become infected. On dissection, however, one finds the midgut quite empty of blood, and the œsophageal diverticula distended like small red bladders. From time to time a little of the blood oozes from the diverticula into the midgut, but not in sufficient quantity to ensure the infection of the insect.

- 6. Influence of feeding upon fruit and foods other than fresh blood.—We believe that when a mosquito feeds on certain fruits the chemical reaction of its stomach becomes unfavourable to occyst development, and that mosquitoes may also be refractory to infection when they feed on the blood of certain animals or birds as well as on the blood of the infecting patient. As a result of many trials in this connection, we have decided that for the purpose of obtaining a satisfactory supply of highly infected insects fresh human blood is the only suitable food. We have found that some individual specimens of maculipennis caught in nature may be refractory to infection until they have had several feeds on human blood with omission of all other kinds of food.
- 7. Influence of the quantity of blood ingested.—Among every batch of mosquitoes, some feed greedily, some lightly, and some not at all. Some of them also evacuate a considerable proportion of the sucked blood while they are in the act of feeding. These points are of importance in the natural infection of mosquitoes, and consideration must be given to them in practical work which has for its object the supply of batches of mosquitoes with a sporozoite rate of 100%. In that work this difficulty can be overcome by causing the mosquitoes to feed repeatedly on the infecting patient.
- 8. Influence of the length of life of the mosquitoes.—The length of life of mosquitoes is one of the most important factors in relation to their infection. A glance at the tabular statement already given will show what a large supply of mosquitoes must be used in order to obtain batches with infection of the salivary glands ("infective mosquitoes"). Maculipennis is a species which can withstand very low temperatures, but its mortality rate at temperatures above 22°C. is high. According to our figures its rate of mortality under conditions necessary for infection is about 50% per week. It seems probable that the short life of mosquitoes during very hot seasons is one of the most important factors in the geographical distribution and seasonal incidence of different species of the malaria parasite.

Comment.—The difficulties which have had to be overcome in order to obtain supplies of mosquitoes with 100% sporozoite infection of the glands have helped us to realize how many special conditions must be fulfilled in nature for the effective transmission of malaria from man to mosquitoes. Our observations on this subject help to explain why it is almost an invariable rule in nature, even in very malarious places, to find only a low percentage of infected mosquitoes. They explain, also, why malaria in nature is essentially a "household disease," for it is obvious that certain kinds of houses or dwellings are the only places in which all the necessary conditions can be fulfilled. This finding is of considerable importance in relation to the endemiology and epidemiology of the disease.

# II.—THE PERSISTENCE OF INFECTIVITY OF MOSQUITOES WITH SPOROZOITES IN THE GLANDS.

When a batch of mosquitoes has become "infective" (sporozoites in the glands), it is our practice to keep the insects in an ice-chest at from 4°-6° C. during the periods between the use of the batch for infecting purposes. This plan reproduces artificially what happens to maculipennis in nature during winter in northern climates. It has enabled us to add something to the literature on the resistance of zygotes and sporozoites to cold, and on the duration of infecting power of mosquitoes. Our observations on these points show that as regards P. vivax the oöcysts in the stomach and the sporozoites in the glands are not killed when a mosquito lives continuously for three weeks at the low temperature of 4°-5·5° C., nor even when the temperature during six days is below freezing-point. Nor are they killed when a mosquito lives intermittently at a low and at a high temperature for a long period. Growth and development of oöcysts are arrested at the low temperatures, but begin again when the temperature becomes sufficiently

high. Some of the mosquitoes in our successful batches have lived and continued to be infective for periods ranging between 29 and 92 days after sporozoites were present in their glands. These observations support and supplement the findings of workers who have caught and dissected mosquitoes in nature during the winter in different countries, particularly the findings of Swellengrebel\* in Holland, Wenyon† in Macedonia, and Sella‡ in Rome. Considering the findings of these observers in conjunction with our laboratory results, we do not doubt that P. vivax can be carried through even a severe winter in hibernating mosquitoes, and that the carriage may be in either the oöcyst stage or the sporozoite stage of the parasite or both.

In connection with the persistence of infectivity through the winter (and for a long period at any season), it must be remembered that an infected mosquito nearly always carries zygotes at different stages of development. These zygotes ripen and rupture at different times, and in consequence the salivary glands are continually being replenished with sporozoites during a considerable period. The following results of dissections exemplify this point:

Mosquitoes found Infected during each Ten-Day Period following the First Infective Feed.

			glands w	in which the vere continua hed with spot	lly being	Batch 18, in which the salivary glands were not being replenished.			
_		With oŏcysts (stomach).	With sporozoites (salivary glands).	Number of oppor- tunities of biting given during the period.	With oöcysts (stomach).	With sporozoites (salivary glands).	Number of oppor- tunities of biting given during the period,		
			%	%		%	%		
ist ten days .			92	0	-	% 48	ő	_	
2nd	,,		86	20	} 15 {	70	5		
3rd	,,		45	100	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	6	75 85	19	
4th	,,	•	27	100	2	0		6	
5 <b>th</b>	,,	•	57	100	10	0	85	4 8	
6th	,,	•	60	100	8	0	66		
7th	,,	•	100	100	2	0	20	4	
8th	,,	•	· —	_	0	_			
9th	,,	•	l —	— <u> </u>	0		_	_	
oth	,,		100	100	1	l <del></del>	l —		

<sup>§</sup> Salivary glands still crowded with numerous sporozoites.

It will be seen from this statement that the mosquitoes of Batch 16, in which the salivary glands were continually being replenished with sporozoites, remained heavily infective during the whole period of their life, but that the mosquitoes of Batch 18, in which the salivary glands were not being replenished, gradually got rid of nearly all their sporozoites.

# III.—OBSERVATIONS RELATING TO THE TRANSMISSION OF MALARIA FROM MOSQUITOES TO MAN.

I have already mentioned that 52 patients among the 221 who were bitten by the mosquitoes of our infective batches failed to develop malaria within the usual

<sup>||</sup> Two infected out of ten examined, but the sporozoites in both cases were very few.

<sup>\*</sup> N. H. Swellengrebel (1924), Nederl. Tijdschr. v. Geneesk., p. 750.

<sup>†</sup> C. M. Wenyon (1921), Journ. Roy. Army Med. Corps, xxxvii, p. 187.

<sup>‡</sup> M. Sella (1920), Internat. Journ. Public Health, i, p. 341.

incubation period of the disease. Some of the patients who failed to develop the disease were bitten on more than one occasion by mosquitoes which were proved by subsequent dissection to be highly infective. I am not yet in a position to explain why those patients remained refractory. Fifty of the 52 failures occurred during the winter months between November and March.

#### CONCLUSIONS.

The purpose of our laboratory work on the infection of mosquitoes would not be fulfilled unless, in addition to complying with official requirements relating to the treatment of mental diseases with a pure strain of *P. vivax* in mosquitoes, it enabled us at the same time to add something to existing knowledge of the epidemiology of malaria. It is obvious that the application of our observations to that end necessitates the assumption that what happens under artificial laboratory conditions will also happen in nature. Allowing that this assumption is justifiable I may summarize some of our conclusions briefly as follows:

- 1. Our observations seem to show clearly that of the vast numbers of Anopheles mosquitoes which exist in malarious places, only a very few become transmitters of malaria. This being so, it may well be asked how it comes about that in many places all the inhabitants are infected with the disease. The answer is certainly given by the observation that a mosquito which has succeeded in becoming infective retains its infecting power for a long period, and can infect many people. Different batches of our mosquitoes lived and continued to be infective for periods ranging from one month to three months after the date in which sporozoites were present in their salivary glands. Some of the mosquitoes in these batches, after biting between 30 and 40 patients, still had numerous sporozoites in their glands. This was because the glands were replenished from time to time with sporozoites, e.g. occysts which ripened and ruptured at different times. In nature, a mosquito which has made its home in a house containing several malarious children who are untreated has frequent opportunities of becoming freshly infected; the result is that its stomach carries oöcysts in many stages of growth, and its salivary glands are restocked with sporozoites from time to time throughout the remainder of its life.
- 2. The observations relative to the resistance of oöcysts and sporozoites to cold, coupled with the observations on persistence of infectivity just mentioned, lead to the conclusion that benign tertian malaria can be carried through even a severe winter in hibernating mosquitoes. This persistence of infectivity through the winter explains some of the occurrences in Northern Europe of primary attacks of malaria during that season and in early spring.
- 3. Why is it that in nature only a very few Anopheles become effective transmitters of the disease? Our observations on the difficulties of bringing even a few members of a large brood of mosquitoes to a condition of infectivity seem to us to help considerably in the solution of this problem, and have an important practical application in relation to anti-mosquito measures against malaria. Let me begin by saying that we were greatly surprised to find that, in the highly favourable laboratory conditions in which we work, failures to obtain supplies of infective insects (i.e., with sporozoites in the glands) were so frequent. Our mosquitoes lead a sheltered life. They are protected against sun, wind and rain, and against unfavourable changes of temperature and against natural enemies. The food upon which they thrive best and live longest is available to them without effort or risk, and care is taken to prevent the ingestion of a diet which is unsuitable or is contaminated with bacteria or moulds; when a mosquito refuses to feed it is separated from the rest of the batch and nursed at a lower temperature until it will do so. It seems quite plain that if special conditions of this kind are necessary for the infection of mosquitoes in the laboratory, they will be equally necessary in nature. Therefore we need not hesitate to affirm that in nature the only mosquitoes which become transmitters of malaria are those rare individuals which happen to pass their life under equally sheltered and peculiar conditions. Moreover, our observations show that even among the relatively few Anopheles which in nature come to rest in a place which is favourable to their infection, not many will untimately become infective unless certain additional conditions are fulfilled, as, for example, that the mosquito must have an opportunity

of feeding every day, that it must feed several times on the infective patient, and that it must have no other kind of food than human blood. When one appreciates the importance of these conditions, one realizes how small is the chance in nature that any particular brood of Anopheles will ever be concerned in transmitting malaria. One realizes that the rôle of being a malaria-transmitter is reserved for only a very few individual mosquitoes which happen to pass their life in an environment and in a manner very different from that of the remainder of the brood. And when we accept this conclusion, we must accept also the inference to which it leads, namely, that the secret of a successful control of malaria lies not in the general knowledge that the disease is spread by mosquitoes of a certain genus or species, but in the particular and exact knowledge of the life-history of the few individual mosquitoes whose habits are such that they are likely to get into the special environment and conditions, and to live their life in the special manner, in which alone a mosquito can become a malaria-transmitter. No one who fully appreciates the importance of this conclusion, and accepts it as true, can fail to look upon anti-mosquito measures for dealing with malaria from a new point of view. He will at once realize what a great waste of effort is involved in measures directed against the breeding-places of mosquitoes as a whole, and even in similar measures directed against one species. Instead of considering those measures, he will think constantly of examples such as I have recorded on p. 707 of this paper. He will appreciate at once how dangerous even a single mosquito may be, when it is continuously infective in the manner exemplified for Batch 16 on that page. He will see the futility of employing his staff on antilarval measures in the fields and marshes while permitting a mosquito of that kind to continue for weeks to work its wicked will in the houses of the people. Instead of continuing his inquiry into the habits of particular genera or species of mosquitoes as a whole, he will begin at once to study the habits of the particular individual mosquitoes which get into the dangerous infective condition indicated. He will find that the habits and life-history of these individuals are quite different from those of the general specific group to which they belong entomologically. As I have already said, these individuals pass their life in a manner quite different from that of the remainder of their brood. An essential difference is that instead of making flights in the open air, they pass practically the whole of their life in the particular house in which they first settled. At their first feed in this house they become overloaded with blood and almost too heavy and sluggish to make a satisfactory flight. They find a sheltered dark corner or hole within a few feet of the beds of the occupants of the house, and night after night make the short passage between their hiding-place and the sleeper in the bed in order to gorge themselves with blood. Their eggs ripen only very slowly, and even when they are ripe, the insect is very loth to make the flight necessary for laying them. Often she drops them carelessly after a very short flight, and returns to the hole which she has made her home. Life in the household, with the nightly feed of blood, has become a habit to which everything else is subordinated.

I have said enough to indicate the point of view to which our laboratory work on the infection of Anopheles seems to lead. It seems to confirm experimentally the view already arrived at by many epidemiologists, that in nature the human house or dwelling is invariably the "laboratory" where malaria infection has its origin and is cultivated. It is essentially a disease of certain kinds of houses or other dwellings which fulfil the "laboratory conditions" which we have described.

The reasonable inference is that malaria should be dealt with in the houses of the people rather than in the general environment.

Our observations have led to conclusions on several matters relating to the clinical description and parasitology of benign tertian malaria and to the questions of "susceptibility" and "immunity," but I have decided to confine myself in the present communication to the points referred to above.

It remains only for me to state that my laboratory assistant, Mr. P. G. Shute, has assisted me greatly during the whole of the work summarized in this paper. Without his constant attention to all the details connected with the work it would have been quite impossible to comply with the requests for infected mosquitoes which we received.

The President then called upon Dr. W. D. Nicol for some remarks on the clinical aspects and results of the malarial treatment of general paralysis.

Dr. NICOL said that up to date 29 cases of general paralysis had been treated at Horton by mosquito infection, 5 of whom were still under treatment. Of the 24, 3 were discharged as cured, 12 mentally improved, and in 6 there had been no improvement and 3 had died.

Of the 3 cured, 2 were looking after their homes and one was earning her own living. Of those improved the degrees of improvement varied considerably. However, they were all employable, and their behaviour was such that they were able to look after themselves and enjoy their life here. Some of them had partial insight with loss of delusions, and in others the memory had improved. Of those showing no improvement they had all become mentally worse. In every case the physical condition had considerably improved. Of the deaths none could be attributed directly to malaria; I died of an influenzal broncho-pneumonia following closely a course of malaria; the other 2 showed small areas of focal necrosis, one on the heel and over the sacrum and the other on the buttocks. These conditions got progressively worse and both patients died of pyzmia.

With regard to physical signs, there was no change other than the loss of tremors, the improvement in articulation, and in general health.

With regard to their serology, it was found that the Wassermann did not become very much altered, but the Lange curve in nearly all the cases was no longer a typical paretic curve.

In conclusion Dr. Nicol said that from experience here the treatment undoubtedly gave those patients a chance of recovery which they would not have had otherwise. Though many had improved, the number of cures was small, but doubtless real success lay in the early diagnosis of general paralysis before the destructive process in the brain had commenced or had not become far advanced.

The President then vacated the chair.

There was a plenitude of charts and diagrams illustrative of Colonel James's remarks, on the walls of the lecture hall, and in an adjoining room the microscopic demonstration was staged. There was also exhibited a wonderful collection of the different varieties of mosquitoes, both dead and alive. The latter were arranged in such a way as to demonstrate their life-history.

The large gathering of members and their friends were tremendously interested, as well they might be, for never before had it been possible at any time or anywhere for such a comprehensive exhibition and demonstration in regard to mosquitoes and malaria to be staged.

The microscopes were kindly lent by Hawksley, and in themselves were an interesting exhibition. A member of the firm was in attendance to give any information regarding them.

Members availed themselves of the opportunity afforded of visiting sections of the Hospital as follows:

- 1. Hospital for Malarial Treatment of General Paralysis.
- 2. Admission Hospital "A."
- 3. Pathological Department.
- 4. Lecture Hall and Nurses' Training Centre.
- 5. Ultra-Violet Light Treatment Room.
- 6. X-Ray Department and Operating Theatre.
- 7. Dental Surgery.
- 8. Patients' Printing Department.

A more complete inspection of the Hospital is reserved for the November quarterly meeting, which, if found convenient to members, will be held there.

Tea was served at the invitation of the President in the Recreation Hall, during which the Horton Augmented Orchestra played selections under the leadership of Mr. R. H. Young.

There was a stall in charge of Miss P. M. Elgar, Occupation Therapist, where articles made by patients attending special occupational therapy classes were on sale.

At a convenient moment during the visit a photograph of members and their friends was taken, copies of which may be had at 6s. each, including postage, from Graham, Epsom.

This visit to Horton Mental Hospital concluded the eighty-fifth annual meeting, the first to be held under a Royal Charter, and therefore one long to be

remembered in the annals of the Association. The proceedings were saddened by the death of the former year's President, Sir F. W. Mott, and social functions somewhat curtailed out of respect for his memory. Nevertheless it was agreed on all hands that the meeting had been both enjoyable and fruitful in good works.

## SCOTTISH DIVISION.

A MEETING of the Scottish Division of the Royal Medico-Psychological Association was held in the Royal College of Physicians, Edinburgh, on Friday, July 2, 1926.

Prof. G. M. Robertson occupied the Chair.

There were ten members present.

Before taking up the ordinary business of the meeting the Chairman feelingly referred to the death of Dr. Donald Fraser, the oldest member of the Division, who for over fifty years was actively associated with the Paisley Mental Hospital, Riccartsbar, as Visiting Physician, and whose original work in psychological medicine, especially his studies in epilepsy, were known to all. It was unanimously resolved that it be recorded in the minutes that the members of the Scottish Division of the Royal Medico-Psychological Association desire to express their deep sense of the loss sustained by Dr. Fraser's death, and their sympathy with the members of his family in their bereavement, and the Secretary was instructed to send an excerpt of the minute to the relatives.

The Chairman also feelingly referred to the loss which the Association had sustained by the death of its President, Sir Frederick Mott, K.B.E., one of the most illustrious members of the medical profession. Sir Frederick's brilliant researches into the physiology and pathology of the nervous system early gained for him an international reputation, and his advocacy of the early treatment of mental disease, culminating in the founding of the Maudsley Hospital, and his work for post-graduate teaching in psychiatry have had a profound effect on the progress of the specialty, while his many fine personal qualities endeared him to all with whom he came in contact. It was unanimously resolved that it be recorded in the minutes that the members of the Scottish Division of the Royal Medico-Psychological Association desire to express their deep sense of loss sustained by Sir Frederick Mott's death, and their sympathy with the members of his family in their bereavement, and the Secretary was instructed to send an excerpt of the minute to the relatives.

The minutes of the last Divisional Meeting were read and approved, and the Chairman was authorized to sign them.

Dr. John Keay was unanimously elected Chairman of the Division for the ensuing year. It was resolved that the appointment of Chairman should be for one year, but that the holder of the office should be eligible for re-election.

Drs. R. B. Campbell and Neil T. Kerr were unanimously elected Representative Members of Council for the ensuing year, and Dr. Wm. M. Buchanan was unanimously re-elected Divisional Secretary.

The following candidates, after ballot, were admitted as ordinary members of the Association:

EDMUND STANLEY SAYER LUCAS, M.R.C.S., L.R.C.P.Lond., Assistant Physician, Kingseat Mental Hospital, Newmachar, Aberdeenshire.

Proposed by Drs. Alexander, Annandale and Grant.

REGINALD BAILEY, M.B., Ch.B.Glasg., Second Assistant Medical Officer, Bangour Village, Uphall, West Lothian.

Proposed by Drs. Keay, Crichlow and Buchanan.

ROBERT CAIRNS FORRESTER, M.B., Ch.B.Edin., Second Assistant Medical Officer, Stirling District Mental Hospital, Larbert.

Proposed by Drs. Campbell, Jack and Buchanan.
MARY EVELYN McLAREN, M.B., Ch.B.Edin., Clinical Assistant, Royal Edinburgh Mental Hospital, Edinburgh.

Proposed by Prof. Robertson, Drs. McAlister and Alexander.

The Secretary reported that the Advisory Committee of the Division had met the Education and Examination Committee of the General Nursing Council for Scotland on April 23, 1926, and that the following recommendations regarding the Council's final examination for mental nurses had been jointly agreed to:

- 1. That the written paper should be divided into two parts, namely, the Medical Examiner's part to consist of questions on Sections 6, 7, 8, 9, 10 and 11 of the Council's Syllabus, and the Nurse Examiner's part to consist of questions on Sections 1, 3, 5, 11 and 12 of the Syllabus.
  - 2. That a nurse who fails in one part be required to re-sit only in that part.
- 3. That each part of the written paper be set by a Board of not less than two examiners, and that in order to ensure that the same question is not set by both the Medical and Nurse Examiners, both papers be scrutinized before final approval by the Chairman of the Board of Examiners, this to be arranged for through the Secretary of the Advisory Committee.
  - 4. That the written paper be corrected by the Examiners who set same.
- 5. That each part of the written paper consist of six questions, of which the nurse must answer five, including one essential question, which will be specially starred as such. That the time allowed for each part of the paper be three hours, and that 20 marks be allotted to each question.
  - 6. That only two final examinations be held each year, namely, May and October. The Meeting approved the action of the Advisory Committee.

The Secretary reported that the Amending Bill to the Asylums Officers' Superannuation Act had been introduced into the House of Commons as a private member's Bill, and had been refused a second reading.

Dr. CAMPBELL renewed his invitation to the Division to meet at the Stirling District Mental Hospital, Larbert. Regret was expressed that this meeting, owing first of all to the general strike, and latterly to the restricted train services, had to be called for Edinburgh instead of as originally arranged for Larbert. Dr. Campbell was thanked for his invitation, and it was left to the Secretary to arrange for either the Autumn or Spring Meeting at Larbert, as might be most convenient for members.

A vote of thanks to the Chairman terminated the business of the Meeting.

## EDUCATIONAL NOTES.

Tavistock Clinic for Functional Nerve Cases, 51, Tavistock Square, W.C. 1.—A course of five lectures for practitioners and students on "The Neurosis: its causes, its treatment; its prevention," will be given at the Tavistock Clinic, 51, Tavistock Square, W.C. 1, on Monday, November 8, to Friday, November 12, 1926, at 8.30 p.m., by Dr. Alfred Adler (Vienna), author of The Theory and Practice of Individual Psychology. Fee for the course: Medical practitioners, £1 1s.; medical students (i.e., unqualified), 10s. 6d.

A course of five lectures (open to the general public) on "The Soul of the Child: its development; its diseases; its education," will be given at the House of the British Medical Association, 19B, Tavistock Square, W.C. 1, on Monday, November 8, to Friday, November 12, 1926, at 5.30 p.m., by Dr. Alfred Adler (Vienna). Fee for the course, £1 15. Tickets must be obtained in advance from the Hon. Lecture Secretary, The Tavistock Clinic, 51, Tavistock Square, W.C. 1.

## SCOTTISH ASYLUMS' PATHOLOGICAL SCHEME.

Twenty-ninth Annual Report for the Year 1925.

## [ABSTRACT.]

THE Board of the Scottish Asylums' Pathological Scheme record their appreciation of the research work carried out by Dr. Reynolds in the Laboratory during the year.

In addition to examining specimens sent to the Laboratory of the Board by the various contributing mental hospitals, he has been occupied in prosecuting his special research in connection with the paths of infection to the brain and nervous system. The Medical Research Council has given a further grant of £200 towards the expenses of this important research work.

Dr. Reynolds has given a course of lectures and demonstrations in Neuropathology, now required for the University Diploma in Psychiatry, and he has also taken part in post-graduate teaching.

The Board would emphasize the importance of Dr. Reynolds's visits to the contributing mental hospitals from time to time, as it is felt that by this means the medical officers' interest in pathological work can be kept active and a fuller use made of Dr. Reynolds's experience and advice.

The Board have to report that the University authorities have kindly granted the use of two rooms in the University Buildings for the Laboratory. The new accommodation is, perhaps, rather limited in size, but its position is central and will prove convenient. It has been decided to relinquish the lease of the present rooms in Frederick Street whenever the new rooms at the University are ready for occupation.

The accounts show that the revenue for 1925 amounted to £1,465 19s.  $4\frac{1}{2}d$ ., and a balance carried forward from last year amounting to £309 2s.  $9\frac{1}{2}d$ . The expenditure for the year was £998 3s. 8d., leaving a credit balance at the end of the year amounting to £467 15s.  $8\frac{1}{2}d$ ., or a surplus of £158 12s. 11d. on the year's working.

At the Annual Meeting of the Board, Dr. G. Douglas McRae was reappointed Chairman for another year, and the Executive Committee was appointed, consisting of Dr. McRae, Chairman; Dr. R. B. Campbell, Honorary Secretary and Treasurer; Drs. Kerr, Keay, Bruce, Ex-Provost Stark, Prof. G. M. Robertson and Prof. Lorrain Smith.

Dr. Reynolds reports that he has devoted the greater part of his time to research work in collaboration with Dr. Logan Turner. Their first study on "The Paths of Infection to the Brain, Meninges and Venous Blood Sinuses from Neighbouring Peripheral Foci of Inflammation" was read at the Royal Society of Medicine, London, on June 5, 1925, and was published in The Journal of Laryngology and Otology, vol. xli, in February, 1926.

Their second study on the same subject appeared in The Journal of Largngology and Otology for July, 1926.

Three further studies are in manuscript. These are being revised and will shortly be ready for publication.

# JOINT BOARD OF RESEARCH FOR MENTAL DISEASE OF BIRMINGHAM.

#### Annual Report of the Laboratory, 1926.

## [Abstract.]

Bacteriological.—The typhoid outbreak has necessitated the examination of a very large number of specimens of faces and blood. An investigation into the results shows that there must have been in the past history of the patients a large amount of intestinal infection and bacterial invasion from the intestine (as evidenced by positive agglutinations to organisms of the paratyphoid class). In a large number of cases the faces show organisms of the paratyphoid group, including many true to type and agglutinating in very high dilutions, but of which the most show a difference from virulent types by reason of their not agglutinating known strains of these organisms. One patient died of an intestinal infection with an organism resembling Flexner Y, but which did not agglutinate with Flexner Y serum even after repeated culture. This lends support to the probability of a deleterious effect upon the health of the individual by these undesirable organisms which at least is a highly important factor in hindering any recovery.

The number of specimens showing the ubiquitous B Friedlander must attract notice. The incidence of this organism showed a distinct rise in September-October; the ratio calculated upon all specimens received for the year shows the monthly rate of these organisms for this period against the remaining months of the year to be 2 to 1; and 54 % of the patients at Rubery whose fæces were examined at one time or another showed this organism.

Over 200 gynæcological swabs have been examined and results obtained confirming our last year's finding, i.e., that there is present in a large proportion diphtheroid organisms and streptococci often within the cervical canal.

Brain material is mostly sterile as far as our present anaërobic and aërobic methods have demonstrated; occasionally streptococci in pure culture have been found, in each case of the Streptococcus mitis class. Streptococcus mitis may be regarded

from its biochemical reactions as a Strep. pyogenes, differing, however, in being non-hæmolytic, and thus possibly belonging to the neurotoxic group.

Iodine in thyroid gland.—A new method for estimating iodine in thyroid has been published in the Biochemical Journal, and a paper was read at the annual meeting of the Medico-Psychological Society last July and published in the Journal of Mental Science.

Basal metabolism.—The work done has shown the great importance of the conscious and unconscious contraction and relaxation of muscles in relation to the basal metabolic rate. A normal person sitting in a comfortable armchair with the muscles relaxed and using no effort in concentrating his attention may show a metabolic rate even below that usually regarded as evidence of hypothyroidism. The question arises as to whether the numerous publications of results of the bag methods have sufficiently taken into account these important factors. This shows that before any reliable results can be obtained, the question of the relaxation of the muscles must be taken into full consideration in estimating the value of the metabolic rate figures. It is also important to know whether the patient has had any exercise prior to the experiment, as exercise creates an oxygen debt which takes quite a long time to disappear. Investigations of the basal metabolic rate during sleep are being carried out. It is hoped to collect all the results soon for publication.

Animal experiments with hypnotic drugs.—This investigation has been continued and demonstrated striking histological changes in the white matter of the central nervous system—as shown by the presence of mucoid bodies resembling, but not identical with amyloid—which can be produced at will by the administration of hypnotic drugs orally or subcutaneously, and so far as the investigation goes are associated with changes which suggest alteration in the metabolism of the neurones. A considerable amount of evidence has been collected from observations on treated and untreated cats and monkeys and will shortly be published.

Permeability of brain membranes.—Following the experiments of F. K. Walter (Rostock), who has determined the ratio of the bromide ion (selected on account of its close resemblance to chloride, which it can to some extent physiologically replace), in the blood and cerebro-spinal fluid after the administration of sodium bromide, and who found the normal ratio of bromide in the blood and cerebro-spinal fluid to be about 3 to 1, there has been commenced an investigation into the permeability of the choroid plexus and brain membranes on these lines in cases of general paralysis, etc., under treatment in the hospital by malaria and other methods. The investigation suggests the possibility of assistance in the prognosis of general paralysis under treatment, based upon this permeability ratio, and also may aid our understanding of the secretion of the cerebro-spinal fluid.

It is well known that a diminution of intake of table salt is a valuable method of increasing the activity of bromide salts used in the treatment of epilepsy; probably this is due to a replacement of some of the sodium chloride of the cerebro-spinal fluid by the bromide salt.

Other work includes the determination of fat, lipoid and cholesterol ratios of the testes and adrenal gland. An attempt will be made to study a few post-mortem cases from the bacteriological, biochemical and histological aspects and to correlate the results.

## THE THIRD SCANDINAVIAN NEUROLOGICAL CONGRESS.

THE above Congress was held on September 17 and 18, 1926, in Oslo, and the following is a brief account of the proceedings.

After the election of the President (Prof. Monrad-Krohn) and Vice-Presidents (Profs. Marcus, Hagelstam and Viggo Christiansen) reports were read by Borberg and Saethre on neurosyphilis, the first day being entirely devoted to this subject. A short communication by Dahlström stated that meta-lues were exceedingly rare among patients treated on the principles laid down by the late Prof. Boeck, of Oslo (an anti-mercurialist)—a point of great interest.

On the second day Gundersen (Oslo) raised the question of a possible relation of epidemic encephalitis to epidemic parotitis. From epidemiological observations in Norway he showed the probability of a very close connection

between the two diseases. Ventriculography and cerebral operations were discussed by Antoni, Olivercrona, Magnus, Monrad-Krohn. Prof. Henschen spoke of the physiology of binocular vision, and in another communciation pleaded the necessity of assuming an "agraphic centre." Hansen related observations of a disease which he considered to be identical with Huntington's chorea, and claimed that this disease had been observed and described by a local practitioner in Norway long before Huntingdon. Further interesting communications were made by Hagelstam, Marcus, Wohlfahrt, Thjötta, Winther, Höglund, Wernoe, Jörgensen, Sahlgren and Nylen, Kahlmeter and Bruusgaard.

On the President's proposal, Prof. S. E. Henschen, the nestor of Scandinavian

neurologists, was elected "President d'honneur."

Finally it was decided that the Fourth Scandinavian Neurological Congress should be held in Helsingfors in 1929.

[Communicated by Dr. T. Lossius, M.B., Secretary of the Congress].

## CENTENARY OF THE DEATH OF DR. PHILIPPE PINEL.

The following letter from the Association was conveyed by the Association's representative, Dr. Donald Ross, to the Congress of Alienists and Neurologists of France, held at Geneva and Lausanne from August 4-7, 1926, at which the centenary of the death of Pinel was celebrated.

"The President, Officers and other Members of the Royal Medico-Psychological Association send their cordial and fraternal greetings to the Alienists and Neurologists of France assembled in congress at Geneva and Lausanne, August 4-7, 1926, and with their colleagues likewise engaged in the humane and noble duty of treating those suffering from mental disorders, welcome this opportunity of recording their appreciation of the great work done by Philippe Pinel, whose personality has been an inspiration to psychiatric physicians in every country of the world.

"The Members of the Royal Medico-Psychological Association, in acknowledging their indebtedness to Pinel, feel that they have faithfully carried on the great tradition he created. They also feel that they are associated with him in no ordinary way. It was Pinel who translated into French the medical works of Prof. Cullen, of Edinburgh University—himself a great psychiatrist. Our academic courses of lectures on psychiatry were directly inspired by Esquirol—first the pupil and then the friend of Pinel.

"The allied work of John Howard in regard to the reformation of prisons, workhouses, etc., which also drew attention to the pitiable lot of the weak-minded and insane confined there, carried out the ideals of Esquirol, which is another

bond between us and Pinel.

"On this memorable occasion, which recalls the glorious and epoch-making work of a great French alienist, the Royal Medico-Psychological Association sends its congratulations to those now assembled, whose brilliant achievements have advanced psychiatry to the high position it now occupies among the medical sciences."

R. WORTH,
Hon. General Secretary,
The Royal Medico-Psychological Association.

## OBITUARY.

ROBERT HENRY COLE, M.D., F.R.C.P.Lond.,

Physician and Lecturer in Mental Diseases, St. Mary's Hospital, London, and Ordinary Member since 1892.

The sudden and unexpected death of Dr. R. H. Cole on August 10 was the result of an attack of angina pectoris. Of the condition which proved so rapidly fatal he had no previous warning, and was active and cheerful up to the evening of the night of his death, when he was preparing to start for a holiday in Brittany.

Dr. Cole was born in 1866, and was destined for the Civil Service. Always

keenly interested in medicine, he entered St. Mary's Hospital on the first opportunity, and qualified in 1889. His early business training was of great value, and he himself often remarked that a short acquaintance with business and office routine proved a great asset to a medical man in later years. He graduated as M.B.Lond. in 1892, and proceeded to the M.D. in 1895. The following year he took the M.R.C.P., and was elected a Fellow in 1917.

After holding a house appointment at St. Mary's Hospital he became a Resident Physician at Moorcroft House, where he did many years of valuable and painstaking work. Up to the date of his death he visited Moorcroft, Hayes Park, and their dependencies weekly. His intimate knowledge of clinical psychiatry has been of great help to his colleagues, and was ever at their service. He had a very happy way of dealing with the "difficult" patient. He seemed to find some fortunate solution for every complaint and every grumble, and left behind him an atmosphere of peace where he found discord and discontent.

In 1907 Dr. Cole took up consulting work in London, shortly afterwards being appointed Physician for Mental Diseases to St. Mary's Hospital and Lecturer to the Medical School, posts that he held to the day of his death. He held many other appointments, including those of Examiner in Psychology and Mental Diseases to the University of London and Lecturer in Mental Diseases at Bethlem Royal Hospital. He was also Home Office Visitor to the State Inebriate Reformatory at Aylesbury, and Visitor to the Approved Institutions for the Mentally Defective in Middlesex. During the War he served as Consulting Physician to the Special Hospital for Officers at Palace Green.

In 1925 he was President of the Section of Psychiatry of the Royal Society of Medicine. He was the author of numerous articles in various publications, and published in 1913 his well-known *Text-book of Mental Diseases*, now in its third edition.

Dr. Cole was a sound physician as well as a psychiatrist. He held strong views on the necessity for mental hospital physicians to obtain at least one resident appointment at a teaching hospital before taking up their specialty. As a psychiatrist he was a careful clinician, and could be relied on to give a remarkably accurate prognosis. He had a strong leaning towards the physiological views of the basis of mind, and for long regarded the neo-psychological school of thought with caution, and even hostility. But he was always a voracious reader, and of late years had shown much sympathy with the conception of unconscious mechanisms, recognizing their importance in the study of the symptoms of insanity. His Presidential Address to the Section of Psychiatry of the Royal Society of Medicine is evidence of a wide outlook on the problem of mental disease, and provides a stimulating and hopeful survey of his years of experience in practice.

Dr. Cole will be sadly missed by our Association. His membership dates from 1892, and he was always ready to help our many activities. He was Secretary of the Parliamentary Committee from 1912-1921, when he became its Chairman. His extensive knowledge of the law and its history in relation to insanity fitted him to guide the work of this Committee in a special manner.

Dr. Cole was an ardent supporter of the After-Care Association, a branch of work in which he took a keen interest. For many years he insisted that some form of social service in connection with after-care was essential to the successful treatment of acute mental illness. He advocated the support of after-care work by funds provided by local authorities, and maintained that such expenditure would be well rewarded.

In his work, whatever it might be, Dr. Cole was tireless, and pursued his aims with a steady concentration, sparing neither time nor effort. In consulting work his advice was practical and based on a long and close contact with patients. Widely read, and singularly well informed, his guidance was often sought by younger men, whose difficulties he would smooth by wise and kindly counsel. A loyal colleague, and a staunch friend, his passing will leave a gap in the lives of those who knew him best that can never be filled. For his sake we can rejoice that the end came suddenly, with little suffering, and while still enjoying the fullness of his powers. To his family his sudden loss will be a grievous blow. For Dr. Cole found his greatest joy and happiness in the intimacy of his family circle. To his widow, his son and daughter, the thoughts of all of us will go out in heartfelt sympathy during this time of bereavement.

G. W. B. JAMES.

#### ROBERT HUNTER STEEN, M.D., F.R.C.P.Lond.,

Late Medical Superintendent, City of London Mental Hospital, and Ordinary
Member since 1898.

Dr. R. H. Steen, who died on July 12, at the comparatively early age of 56, was for some years the Hon. General Secretary of the Association, a post involving the performance of onerous duties which were faithfully discharged by him, and that fact alone deserves grateful remembrance in the pages of this Journal.

Dr. Steen was born in 1870, the son of Robert Steen, Esq., Ph.D., of Belfast, in which city he was educated. He there gained a scholarship at Queen's College and took his B.A. at the Royal University of Ireland with honours in 1891. He then went to St. Mary's Hospital, London, gaining prizes in pathology, dermatology, and honours certificates in medicine and clinical medicine, and in 1894 took his M.B.Lond. with honours in medicine. He afterwards became House Physician to Sir William Broadbent, and then House Physician at the Brompton Hospital for Consumption. He commenced the study of mental diseases as a clinical assistant at Wakefield, and subsequently became the Assistant Medical Officer at the Priory, Rochampton. In 1896 he obtained his M.D.Lond., and in June, 1897, was appointed the Senior Assistant Medical Officer at Graylingwell Hospital. Here, from the day of its opening, he laboured for seven years, untiringly and successfully, until he obtained a thoroughly well-deserved promotion in 1905, upon his appointment as the Medical Superintendent at the City of London Mental Hospital. There he quickly established a high reputation. During the 20 years he held office he did a remarkable amount of good and useful work in the hospital and outside.

He was once the President of the Dartford Division of the British Medical Association; always an active member of the Royal Medico-Psychological Association; and Secretary to its South-Eastern Division from 1905 to 1920, and General Secretary in 1915. He was a frequent contributor to the Journal of Mental Science and to other medical journals. His writings include reports on cases of ruptured heart, diphtheria, influenza, a rare case of intestinal strangulation. an account of an electro-thermal paraffin bath, which he constructed in 1900; several letters, well to the point, on subjects being discussed in print, and always so polite in tone that one of them (in a somewhat heated Freudian contest) earned from an opponent a tribute to Steen's "exquisite courtesy." There were also three papers read at Association meetings, and published, upon "Principles which ought to control Modern Construction," and dealing with "asylum hospitals." Though these were written five and twenty years ago, it might be useful, in connection with present-day proposals for the "acute hospital," to quote this extract: "In this connection the words of Connolly may be recalled: 'I believe the absolute separation of the curable and incurable to be neither practicable nor desirable; and I know that the incurable patients are generally better companions for the curable than curable patients are.' Dr. Greene in a paper read in 1890 says: It is a common observation that association with the quiet chronic has a most beneficial effect on the acute case, more especially if this association can be combined with steady employment of some kind.' When the main attention of the staff is concentrated in the Hospital Block there is a liability that the chronic patient may be neglected. It is feared that there is an idea, much too common, that they should be put into a large building, housed and fed comfortably, and that then one's duty is at an end. The doctor ought, however, to find that some of his best work will be done among these cases—though this work may not bring him prominently before the public with a remarkable recovery-rate." are worthy of consideration to-day.

The JOURNAL has also published papers by Steen upon "Mental Disease and Exophthalmic Goitre," "Attitude in Dementia Præcox," "Hallucinations in the Sane," and on "Chronic Hallucinatory Psychosis," which was specially commented upon in the obituary notice in the Lancet as follows: "This last essay showed very well Steen's learning as derived from actual experience and sound methods of thought. Psychological medicine has lost in Steen a valuable thinker and worker."

Dr. Steen took his M.R.C.P.Lond. in 1913 and became F.R.C.P. in 1921. He was appointed Lecturer and Out-Patient Physician in Psychological Medicine to King's College Hospital. He became Emeritus Professor on his retirement, when his activities had to be limited owing to ill-health. But Dr. Steen stuck to his work at Dartford as long as possible until towards the end of 1924, when he was obliged

to go into Guy's Hospital for treatment. His Committee reported in February, 1925: "The Medical Superintendent has continued to discharge the duties of his position in an admirable manner deserving of our highest commendation, but we regret to report that for some months we have been deprived of his valuable services owing to his ill-health." In June, 1925, his resignation became imperative, and he retired to Sutherland Avenue, Bexhill; there, during a period of improvement which sadly proved to be but transient, a visit from his Chairman, Sir George Wyatt Truscott, gave him very great pleasure. But after all his strenuous life he was not destined to any quiet enjoyment of rest; a recurrence of cardiac pain and a failing heart confined him to bed, where he was heroically nursed, day and night, by his devoted wife, through sufferings which he bore patiently and uncomplainingly till death came as a merciful release.

Personally, Robert Hunter Steen was a man of sterling character, always bright and cheerful, genial, kindly and courteous. He was fond of cricket and all games, and of yachting; a lover of music and, in his younger days, of acting. He could stage-manage and give a capital performance in farcical plays, providing that best of medicines for the mind—uproarious laughter.

He was a broad-minded, sympathetic and experienced physician, true to his duty, managing with tact, gentleness and firmness, ever striving to improve his hospital and to make it all that a hospital should be. He earned the respect of his staff, the affection of his patients, and the full confidence of their relatives. A man of firm faith and high principle he set forth a good example, and his memory will long live at Dartford.

The Times of July 20 printed a contribution by his old and valued friend Dr. Leeson, from which may be quoted: "A man of blameless life, selfless in the highest degree and beloved by all who knew him, he passed his devoted and beneficent life amongst the 'sweet bells jangled out of tune.'" To which it may be appropriately added that he was one "whose faith and works were bells of full accord."

H. A. Kidd.

# JOHN JONES GASPERINE, M.R.C.S.Eng., L.R.C.P.Lond., D.P.H., D.P.M. Ordinary Member since 1922.

A telegram from New York on Saturday, August 14, conveyed the sad news of the tragic death on the previous night of Dr. J. J. Gasperine, who died from the injury received when diving at Long Beach. He was acting as surgeon of the "Tuscania," but up to recently was Medical Superintendent, Rendlesham Hall, Woodbridge, Suffolk.

He was born in co. Tyrone, Ireland, and was 36 years of age at death. joined the Royal Navy in August, 1914, as a student of Edinburgh University, and subsequently obtained leave to qualify in medicine and surgery, which he did from Bart.'s Medical School in 1916 as M.R.C.S.Eng. and L.R.C.P.Lond., and returned to the Naval Service, where he did good work, chiefly in relation to the prevalence of venereal diseases. He was demobilized in January, 1919, and at once became Clinical Assistant and then House Physician at St. Bartholomew's Hospital until July of the same year. He also was Assistant Pathologist, London Lock Hospital, until November, 1919. After a period of general practice he joined the London County Mental Hospital Service at Hanwell in February, 1921, and was transferred to Horton Mental Hospital in August of the same year, leaving the service for private reasons in August, 1923. He took his D.P.H. in 1921, and his D.P.M. in 1922. He had two periods of special leave in America for family reasons, and on both occasions occupied his spare time working at Manhattan State Hospital. He was very fond of roaming the world, and left his appointment at Rendlesham Hall to return to sea life. The writer was well acquainted with Dr. Gasperine. He was a fearless and adventurous man, a clever clinician and pathologist, and an expert in the modern technique of the investigation of venereal diseases. He did much original work, which unfortunately he was never able to finish. He was a good companion, well travelled, and had many strange adventures, of which he loved to tell. Needless to say he left many friends, who now mourn his loss. He was most happily married, and our sincere condolence goes out to his widow in her sad bereavement. His body was brought to England for burial, which took place at Hampstead on August 27, 1926.

J. R. LORD.

#### DEATH OF PROF. BMIL KRAEPELIN.

As we go to press we learn the sad news of the death on October 7, 1926, of one of the Association's most illustrious honorary members, namely, Prof. Emil Kraepelin, of Munich. Only recently did we join in the homage paid to him by the world of psychiatry on the occasion of his seventieth birthday (vide pp. 227-9). There is no time now for an extended reference to his personality and career, but the following is an appreciation written by Dr. J. Bresler, another honorary member, in a recent number of the Psychiatrisch-Neurologische Wochenschrift (translated by Dr. A. Walk).

#### EMIL KRAEPELIN.

#### 7 October, 1926.

To those at a distance the news was quite unexpected. In Munich it had been known for some weeks that his activities, to which age seemed to have set no limits, were being carried on in spite of the progress of an increasingly painful and severe illness, and with the bitter knowledge that the end was imminent. How joyfully, on February 15 last, had we brought him our homage on his seventieth birthday! glad we were that his indefatigable efforts for the erection of a home for the German Psychiatric Research Institute had borne fruit! We learned that he was engaged in producing the ninth edition of his excellent text-book, and were convinced that it would be not merely a continuation, but a rejuvenation of his work. We also heard that in November he would undertake the journey to India to carry out studies in regard to general paralysis and comparative psychiatry. We now learn that on October 4, when he wrote the Preface to the second volume of his text-book, he was already near the end, and that he fought for and succeeded in gaining time and strength enough to dictate his last instructions and wishes for the further development of the Research Institute—a worthy end for one of the Immortals.

To continue his work and realize his aims is a rich but difficult heritage for German Psychiatry. May it well and worthily carry out the trust Kraepelin reposes in it!

Bresler.

#### NOTICES BY THE REGISTRAR.

#### Regulations for Divisional Prizes.

- 1. Two Prizes, of £10 and £5 respectively, shall be awarded annually by the Association (provided sufficient merit be shown) for papers read during the preceding calendar year at a Divisional Meeting by an Assistant Medical Officer.
- 2. Every Assistant Medical Officer of any asylum or institution for the insane, being a member of the Association, shall be eligible to compete, but—
  - 3. A prize shall not be awarded more than once to the same individual.
- 4. Only papers handed in to the Secretary of the Division at the meeting at which they are read will be considered in competition.
- 5. The papers shall be adjudicated by the President of the Association, together with an Assessor or Assessors to be appointed by him should he see fit.
- 6. The results shall be announced, and the prizes awarded, if any, by the President at the Annual Meeting in each year.

(First award in July, 1913, for papers read during the year 1912.)

#### BRONZE MEDAL AND PRIZE FOR 1927.

Essays for the Bronze Medal and Prize of the Association must be sent to the Registrar, St. Andrew's Hospital, Northampton, not later than June, 1927. A nom-de-plume must head the essay, and the author's name be enclosed in a separate and sealed envelope with only the nom-de-plume written on the outside.

FINAL EXAMINATION RESULTS FOR THE NURSING CERTIFICATE, MAY, 1926.

List of Successful Candidates.

Those marked (\*) are "With Distinction."

Berks.—Agnes Ada Dodd.

Cambridge.—Phyllis Irene Poole.

Carmarthen .- Thomas Richards.

Cheshire, Chester.-Gladys Fernyhough, Doris Davies, Constance Dodd, Nellie Donlan, Dorothy Simpson, Madge Mayhall, Charles Leopold Mills.

Cheshire, Macclesfield .- \*Caroline O'Donoghue, Kate Drugan, Mary K. Quinn, Mary L. Edwards, Catherine Hughes, Eleanor C. Long, Mary J. Healy, Mary A. Page, Lilian O'Connor, Charles H. Nield, Albert G. Davies.

Cornwall.—\*Albert John Davis, Stanley Symes Luscombe, William A. Paul. Cumberland and Westmorland.—Jessie Helen Currie.

Denbighshire .- Sarah Letitia Evans.

Derbyshire .- Gladys Rose Isabel Clayton, Doris Palmer, Jessie Elizabeth Bond, William Henry Carter, Arthur Wroe, John Edward Dolby.

Devonshire.-Maurice Ronald Blanchard, Leonard Crump, Percival Frank Morrish, Frederick Lewis Morrish, Dora Woolmington, Leonard James Collacott, Eva Mary Sully, Cathleen Cullen, Gladys Ernestine Nicholls, Sarah J. Appleton, Elsie Louisa Hooper, Nellie Carnell.

Dorset .- Percy Frederick Rockett, Charles Victor Chubb, Cyril Robert Board, Leonard Cornick, Edith Lilian Morris, Sarah Murden, Ethel May Knight, Maria Holland.

Durham.-Rose Kirk.

Essex, Brentwood.—Beatrice Ketch, Marie Gibbons, Ethel May Fuller, Edith Lilian M. Harvey, Gladys Hilda Carter, Bertha Joyce Porter, Doris Mary Proctor, Ethel Thomas, Henry Edward Weston.

Essex, Severalls.—Alfred James Henry Burnage, Arthur Frederick Cooper, Frank Harding, Thomas Daniel Jolly, Alfred Lawson, Joseph Arthur Martin, Edwin John Miller, Donald MacIver, Charles Thomas Patten, Vincent Albert Settle, Charles Herbert Woodward, Dorothy Winifred Ruffell, Mary Ada Halfacre, Margaret Colbert.

Glamorganshire. - John Tudgey, William Green, William Jones, Hugh Concannon, Clifford W. Harrison, William G. Bevan, Isaac Woodroff, Idwal Switen, William E. Roberts, Albert E. Tomlinson, Bernard Ward, James Kehoe, Augustus A. John, Arthur J. Roberts, Mary Howells, Gladys Ball.

Gloucestershire.—Amos Bace, Alfred Baxter, Ivor John Burnell, Fred Stephen Dyke, Alfred Ernest George, George Hicks, Thomas Keveren, Mabel Jones, Beatrice Minnie Phelpstead, Alice Walter.

Hampshire, Knowle.—Henry Frederick Christopher, William Langridge, William George Pope, Cyril Lancelot Vincent, Alfred James Whitwick, George Ward, Ivy Ellen Hayes, Gertrude Annie Bartlett, Dorothy Alice Pearce, Phyllis Maude Shillitoe, Elsie Watts.

Hampshire, Park Prewett.—Clara Hill, Dorothy Mary Clements, Winifred McKay, Mary Ellen Keniry, Frank Watson Martin, Archibald Frank Eley, Albert Charles Moule.

Herefordshire.—Bernard Edgar Appleby, Louise Mary Lloyd, Ellen Jones, Jessie Jones, Annie Evans, Olive Emily Tyrell, Jessie Maria Elizabeth Davies.

Hertfordshire.—George Wilders, Violet Maud Houghton.

Isle of Man .- Barbara Gammon Ramsay, Donald Allan McIsaac.

Isle of Wight .- Albert Edward Scovell, Irene Maud Ruth Choate.

Kent, Chartham.—Harry Cecil Ives, Frederick Thomas Noakes, William Harmer, Ralph Alfred Lane, Rose Cullingford.

Kent, Maidstone.-George James Davis, Albert Huxstep Wright.

Lancashire, Prestwich.-Sadie Wilson, David Stevenson, Walter Tingle, Frank Lionel Rhodes, Frank Matthews, Stuart Hewison, Charles Alfred Stone, George Henry Bratt, Jack Beesley, Thomas Barker, Harry Hickingbotham, William Smith, Amos Sugden.

Lancashire, Rainhill.—Agnes Mary Beeley, Hilda Critchley, Minnie Fisher, Christina McDonald, Richard Henry Carter.

Lancashire, Whittingham.-Isabella Waite, Ruby Hay, Catherine Atkinson, Mary Hughes, Wilhelmina Best, Frances Elkin, Maria Fowler, John Mercer, Archie Little, Duncan Mackenzie, John Dickinson.

Lancashire, Winwick .- Alice Hunter, Herbert Scruton.

Leicestershire.-Elsie Muriel Scott, William Hartshorn, Patrick O'Farrel.

Lincolnshire, Bracebridge.—Harriet Holmes, Harry Carr, Herbert Edward Hough, Herbert Cecil Chambers, Robert Walton, Albert Edward Winters.

Lincolnshire, Kesteven.—Marie Elizabeth Buckingham, William Hudson. London, Banstead.—Gladys Minnie Crisell, Elizabeth Deegan, Celia Furdom, Olive Esme Jeffries, Elsie Newton, Catherine Sheerin, Ellen Elizabeth Street, Alfred James Mills.

London, Bexley .- Walter Geo. Victor Beckenham, Frederick Cecil Cracknell, Reginald Wm. Tom Harris, Lucy Rose Brewer, Florence McCooey, Edith Hilda Grimwood.

London, Cane Hill .- William Stanley Rouse, Charles Thomas Raymond, Arthur Henry Jas. Couzens, Nancy Muriel Kinsley, Lilian Florence Beasley (pply. Connatty), Violet Mary Hawkins, Emily Edith Pacey.

London, Claybury.—Mary Elizabeth Wakeling, Mary O'Leary, Harry Cuthbert Cottam, Douglas Andrew Longmuir, Hilda Elizabeth Harrison.

London, Colney Hatch .- Samuel Bates, Fredk. William Greenham, George Henry Gurr, Fred King, Hilda Alice Maud Rollings, Violet Annie Luckhurst, Catherine Adah Yorwarth, Dora Elsie Pine Dove, Eva Florence Brewster, Mary Ann Jones (pply. Richards), Mary Blair Ferries, Gladys Maud Lawrence, Katherine Ellen Gudgeon, Ivy Gathercole Smith, Matilda Alice Horton, Ethel Phyllis Furner, Sybil Shaw.

London, Hanwell.—Arthur R. Ayris, Thomas W. A. Jones, Percy H. G. W. Smith, Archibald B. Parks, Henry G. Ferris, Henry G. Neate, Mary L. Stone, Elizabeth Whelehan, Ellen L. Burgess, Alice McLaughlin, Rose M. Cutter, Elsie F. Ashley, Alice M. Osler, Mabel R. Butler, Winifred R. Lowman, Elizabeth Jenkins, Cicily A. Abbey, Mena Reynolds, Ethel A. Thorne, Maud E. Elliott.

London, Horton.—Clara Harley, Jeane Muir Kinniburgh, Marie Edith Ludgate, Caroline Mary Reeve, Mabel Holland Simpson, Florence Beatrice Wakeman.

London, Long Grove.-Grace Ethel Bradley, Blanche Amelia Hill, Ellen Constance Marshall, Phyllis Mevanweay Wiggins, James Charles Dobberson, Thomas Washington Davey, Samuel Howard, Charles Vincent Harris, William Hagger, Victor George Stackwood, Percy Joseph Stuart Taylor, George William Winneld, Laura Beatrice Dilloway, Marjorie Mallett, Violet Welthy Webb, Arthur Albert Bird, Frederick Donaldson, George Leonard Gibson, Edward Gordon Honess, Ambrose John James Hulett, George Hart, Edward Charles Smith, Joseph Robb Webster, Charles Henry Ward.

London, Maudsley.-Gladys Paton, Esther Lucas, Gladys Robertson, Norah Homer, Ida Burton, Doris Lewis, Herbert Copeland.

London, West Park.-Sophia Mills, Lily Rowley, Elsie Olive Pepall, Mildred Ivy Heath, Florence Ada Dance, Edith Knight.

Middlesex, Napsbury.—Henry George Johnson, Alfred John Farmer, Fredk. Gordon Oliver, Albert Edward Cooper, Albert Victor Fitzjohn, Emma Curme, Louise Girdlestone, Hessie Bennett, Hazel Stokes, Lily Whitehead.

Middlesex, Springfield.-Ethel Mary Cox, Ladysmith Dujohn, Florence Mabel Heard, Winifred Mary Hatch, Elsie Winifred Jennings, Esther Gertrude Caroline London, Elsie Gornall, Mary Ann Painter, Leslie Beck, David Beattie, George Anderson, John Smith, Frederick Simmonds.

Norfolk.—William Johnson Ayton, Reginald George Garner, Harry John Melrose. Northamptonshire.—Harry Tiffer Baker, Walter Henry Clarke, Ernest James Love, Ernest Mark Lawrence, Muriel Adams.

Nottinghamshire .- Margaret Emma Lucas, Percy John Francis Jarvis.

Oxfordshire.—Veronica Rowland, Dorothy Annie Green, Lilian Louisa Hammond, Florence Edith Smith, Blodwen Davies, Emmeline McCausland, Margaret Nellie Organ, Rose Thomas, Henry George Adams, Frederick Jesse Bailey, William Chas. Heydon, Christian Edward Billing, Clifford Harding, Charles Edward Pearce, Edward Arthur Edwards.

Shropshire.—George Robert Goode.

Somerset and Bath, Taunton.—Edgar Shire, Sidney William Poole, Reginald Thos. Richards.

Somerset and Bath, Wells .- James Robert Winter, Reginald William Martin, William H. James.

Staffordshire, Burntwood.-Nellie Isabel Boazman, Olive Lilian Lewis. Mary Poole, Kennard Hine, Cyril Edward Horton.

Staffordshire, Cheddleton.-Gertrude Nolan, Alice Avenia Turner, Ellen Butler, Bridget O'Connell, Peggy Morris, Eileen Kathleen Healey, Elna Sylvia Noponen. Suffolk.-Helen Norton, Ernest Frederick Churchyard, Arthur Wm. Wix, Alfred John Meadows.

Surrey, Brookwood.—Arthur James Matthews, Albert John Adams, Gladys Florence Wakeford, Gladys Lilian Hamblyn, Lily Lidyard, Peggy Josephine Jones, Ethel Onn, Alfred Isaac Comber, Henry Charles Dopson.

Surrey, Netherne.—Sarah Summersgill, Freda Lilian Dugmore, Frances Charlotte Goulding, George William Parsons, Percy Jas. Canham, Leonard A. E. Mason, Thomas Joseph Mason.

Sussex, Graylingwell.—Hetty Watson, Frederick Southin, Leonard Victor Harper.

Sussex, Hellingly.-Frederick Henry Spooner, Herbert Barnard, Reginald Edward Harold Palmer, Bridget Brown, Mary Magdaline Crowley, Mabel Elizabeth Stockwell, Doris Irene Fessey, \*Lucy Theresa Birkett, Edna Mary May Webb, Florence Maud Lister, Ruby Spencer.

Three Counties, Arlesey.-Ellen Lilian Crawley, Joseph John Farley Payne, Fred Hatherley.

Warwickshire.—Daisy Short, Annie Selina Huckfield, Florence Newell, Lilian Marjorie Davies, Arthur W. Y. White, Evelyn Yardley (née Webb).

Worcestershire, Barnsley Hall.—Herbert Frederick Crouch, George Cecil Parker, John Perry, William Robinson, William Raymond Wood, Doris Evelyn Burns, Sarah Jane Cope, Violet Mary Adams Goodman, Harriet Louisa Holt, Kate Matilda Wharton, Winifred Williams.

Worcestershire, Powick.-George Slater, Christopher Ernest Glover, George Wm. Phillips.

Yorkshire, Beverley.—John Camm. Yorkshire, Clifton.—\*Charles Edward Paylor, Harry Gale, Sydney Hirons Gardner, William Craven, Joseph Smith, Frederick Wills, Charles McQuade, Maurice Flynn.

Yorkshire, Menston.-Albert Edward Brown, Louis R. Heel, Wilfred Marsh.

Yorkshire, Scalebor Park.-James Arthur White, Thomas Richard Carr, Edgar Paley.

Yorkshire, Storthes Hall .- Ernest Dyson, William Edward Eaton, William Gathercole, Samuel Helme, Alfred Ireton, Norman Malt, John Wm. Sanderson, Edward Harry Strange, Ernest Thackray, Florence Ball, Dorcas King, Florence Poppleton, Ellen Atkinson Scarth, Lilian Sykes.

Yorkshire, Wadsley.—Laura Hawksworth, Florence Turner, Alfred James Bowen, Harry Clarke, Robert Gregory, John James Heeley.

Yorkshire, Wakefield .- Alice Maud Hammond, May Leah Moss, Mary Spindler, John Boston, Edward Roland Carlisle, John Wm. Maplethorpe, Ashur Oades, Albert Walton Taylor, Frank Styler, George Baden Williamson, Charles Hinchliffe.

Birmingham, Rubery Hill.-Llewelyn Long, Harold Wood Allison, Samuel Joseph Blunt, Frederick Raymond Green, Horatio Griffin, William Kermode, Bertram George Knee, Randolph Dickson Tait, William Geo. Timson, Elizabeth Sarah Hackett, Rebecca Mary Jefferies, Ivy Walker, Elizabeth Finnigan, Kathleen O'Hara, Alice Baker.

Birmingham, Winson Green .- Doris Bufton, Ruth E. Shakespeare, Ruth Rosier, Charles H. Simmons, Harold V. Southam.

Brighton.-Henry Wm. Chapman Hollingdale, Frederick Robert Baker, Ellen Arthur, Daisy Brown, Florence Therin Turner.

Bristol.-Harry Homeyard, Thomas Long, Bertram Maggs, Helen Langley.

Canterbury.-William Filmer, Harry Gammon, Catherine Mabel Gadsby, Annie Monro Kirkwood, Bessie Swallow.

City of London.—Ernest Newsome, Michael Whitty, Rose Lilian Kemp, Edith Ann Quinn.

Croydon .- Violet Hetty Hall, Percival George Travell.

Derby .- Ivy Josephine Beauprè, \*Mary Jane Thompson, Evelyn Maud Lewis, Edith Parry, Harold Victor Marshall, George Arthur Turner.

Excter.—Elizabeth Ellen Darch, Mary Kentisbeer, Kathleen Wood, Frank Anstey, Bertie Claude Brooks.

Gateshead.—Thomas Edward Archbold, George Robert Fairbairn, Robert Waite, Mary Carlin, Elizabeth Curren, Hannah Olsen, Alice Railton, Emily Shirran.

Hull.—Clara Wilson, Mary Blidget Conlan, Eva Parkin, Harold Marshall, Jarvis James, Arnold Robinson, Leonard Botterill.

Leicester.—Annie McLuskey, Gertrude Blanche Beavan, Cornelius Sullivan, Joseph Pryce Allen, Arthur Alfred John Woodeson, Ernest Fredk. Groom.

Middlesbrough.—Annie Baty, Sarah Ingram, Thomas Edward Coleman, William Walton Blackett Fail, Christopher Fryatt, Charles Jas. Layton, Edgar Matthews. Newcastle.—Arthur Patterson, Gerald Butterworth, Walter Kettlewell, Frank Hunter, Frances Paul, Jane E. Coates.

Norwich.—Robert Armes, William Baldwin, Edna Ruby Harris Flood, Ivy Agnes Whitwood.

Nottingham.—Olive Owen, Elsie Nash, Gerald Kirk, John William Truss, Joseph Alfred Lee, Robert Bramley.

Plymouth.-Mary A. Smith.

Portsmouth.—Charles Alfred Dix, Albert Leighfield, Emily Barnett, Bridget Mary McGrath, Alice Heaton, Lillian Ellen Mary Rann.

Sunderland.—John Burdon, James Phelps, James Hudson, Eleanor May Dunn, Frances Mason.

West Ham.—Elizabeth Coult, Elizabeth Susanna Evans, Mary Lyons, Ethel Elizabeth Marley, Rose Okill, Mary Partridge, Ellen Rowan, Maud May Robinson, Mary Watkins.

M.A.B., Tooling Bec.—Annie E. F. Salt, Alma Almquist, Eva Button, Lily May Mills, \*Anita Burnand, Jessie N. Champion, Madge O. Burke, Harry J. Phillips, William Edward Jackson, Charles Stewart, Andrew Farmer, Frederick Daley.

Barnwood House.—Frederick John Smith, John Edward Godsell, Benjamin Devereux, Stephen Martin, Gertrude Ellen Downham.

Bethlem Royal .- George Percival Oulds.

Bootham Park.—James O'Rorke, Samuel Shirley, \*Eliza McRoy, Florence Munnings.

Camberwell House.—\*Lydia Katherine Barton, Grace Davey, Bridget Mary Johnson.

Cheadle Royal.—Elsie Horton, Lily Massey.

Coton Hill.—\*Norah Mary Adams, Ceinwen Francis, Marie Emily Sambrook, Leonard Beech, Alfred Victor Hancock, Henry James Swann.

"D" Block, Netley.—Thomas Percy Peet, Frederick James Richard Money.

Holloway Sanatorium.—Frank E. J. Ponsford, John C. Belson, Eric William Boris Allin, Herbert Wilderspin, Florence E. J. Dixon, Amy Jeffs, Edith Laney.

Middleton Hall.—Esther Coulson, Lena Lynn.

Northumberland House.—Florence Emily Stevenson, \*Thomas George Flint. Peckham House.—Wilfred J. Connett, \*Annie Lythel Wood, Delia O'Sullivan. Priory, Roehampton.—\*Mary Charlotte Reid, George Lacy Messenger.

St. Andrew's Hospital.—Irene Gladys Berwick, Bertha Bradbury, Patricia Buck, Gertrude May Jones, Linda Lyson, Ellen May Phelps, Harold Reed, Thomas Alfred Morgan, Walter Frederick Valentine, Charles Kenny, Ernest Albert Hutchins, George Robert Cossins, Edward Tranmer, Samuel Rowbotham, Vincent Chadwick.

The Coppice.—Emily Janet Bridges, Violet Gration, Reginald Alexander Palmer, Elsie Mary Barlow.

The Old Manor .- Harold Safe.

The Retreat, York.—Frances Arbuthnott, \*Lily Bolam, \*Annie Devlin, Annie A. Glennie, Agnes A. Hunter, Annie Christine Johnston, Phœbe Lawson, \*Ethel Patterson, \*Bridie Redican, Ann Robinson, \*Marian Studholme Russell, Annie Wainwright, Frances Ellen Wainwright, James Gregg Walker, James Marshall, Frank W. Carlyle.

Ticehurst House.—Florence Bates, Eugenie Gold.

Warneford.—Evan Evans, Mildred Mugleston, \*Dora Trewhitt.

Wonford House.—Florence Holland, \*Phyllis Evelyn Honslow.

Aberdeen City.—Cumming Whyte, Agnes Cran, Violet Rennie, Cath. F. Lumsden, Mary Gill, Henry I. Smith.

Argyll and Bute.—Margaretta MacDonald, Annie Burdis Mitchell, Sarah Mitchell, Robert Gillies, John Blair Leitch, John Moynihan, \*Archibald MacDonald, John Wilkie, James Robertson Wishart.

Ayr.—Ethel E. King, Emily Keys, Margaret McL. Welsh, Flora Jane Chisholm, Marion C. Galloway, Allan Cameron, William Nicholson, \*William McMurdo, John Findlay.

Banff.—Annie Smith Chalmers, Maggie Jessiman Petrie, William McRae, John Adam.

Craig House.—Agnes C. Wilson, Greta O'Mara, Ada Stephenson, Minnie McKay, Annie Muir, Edith Holroyd, Andrew McAndrew, Andrew Robert Blake, Jas. Marshall, Ian Campbell.

Crichton Royal.—Thomas Armstrong Mundell, Neil McVicar, Elizabeth Jane Barr, Elizabeth Anderson, Mary Annie Gordon, Janet Clark, Mary Matilda Watson, Mina Macduff, \*Isabel Turner.

Dundee, West Green.—Bessie Feeley, John Hall Martin, Malcolm McLellan, James McVeigh, Christina Ann Morrison.

East Lothian.—Netta Durie Welsh, Jean Campion, Agnes Brunton, Catherine Rutherford, Annie Cameron, Robert Thain.

Edinburgh District.—Elizabeth Dawson Bartlett, Jemima Clark, Brigid Devlin, Davina Duncan, Mary McDonald, Barbara Foggo, Janet McCulloch Forbes, Annabella Grant, Jean Raeside Harvey, Christina B. Henderson, Annie M. McKenzie, Julia Lyons, Williamina E. Melrose, Mary Merry, Elizabeth Naismith Peacock, Barbara McPherson, Margaret Douglas Pollock, Mary Roughead Ritchie, Donaldina Robertson, Elizabeth Robertson, Elizabeth Mary Sinclair, Isabella Sinclair, Mary R. H. Skinner, Mary Dunlop Thompson, John McKenzie.

Edinburgh, West House. - Marie Leneham, Jean Johnstone, Elizabeth Kelman, Elizabeth Cunningham, Alexander Grant.

Fise and Kinross.—Mary Chisholm, Annie McLean Grant, Ruby McLean Sturrock, Ann Buchanan Heggie, Mary McCorquodale, Phyllis Morton Robertson, James Lindsay, John Dandy Ness.

Glasgow, Gartloch.—Elsie Milne McKinnon, Bridget McGinty, Susan McGinty, Kate Smith, Jessie Clark, Annie Martin, Annie Logie Gracie, Catherine McKay, Ann A. Dingwall, Elizabeth Mary Thomson, Martha Paterson, Grace McKenzie, John Alexander McCafferty.

Glasgow, Woodilee.—Elizabeth Wilson Miller, Christina Johnstone, Catherine Gillespie, Elizabeth Cameron, \*Bessie Whyte, Catherine Kidd, Annie Sneddon, James Kinniburgh, Helen Mary McTaggart, Annie McGill, Agnes Anderson, \*Annie K. McDonald, Williamina Fraser, Margaret Cleghorn, Frances Dyball, John Innes, Thomas Burgess.

Inverness.—Helen Hunter Davidson (or Sluce), Sarah Frances Grant, Mary Jane Ross, Elspeth Jane Munro McLeod, Jane McWillie Watt, Euphemia Mary McLeod, John Shaw, Norman Augustus Munro, William Walker Simpson (Anderson), Edward Inglis, Robert Kinnear Anderson Drummond.

Kirklands .- Rosabel Slorach.

Lanark.—Samuel Morwood, William Foster, Alexander Adam, Thomas Stansfield, Catherine Robertson Todd, \*Mary McColl Forbes, Amelia Mutch.

Montrose.—\*Ann Spence Graham, Elizabeth Murray, Jessie McGill, Georgina Gordon.

Morayshire.-Mary Robb.

Paisley .- \*Thomas Hamilton Donald.

Perth District.-Vera Wylie Mitchell.

Perth, James Murray's.—Helen Shaw Murie Holding, Catherine Downie Smith. Renfrew.—Malcolm MacDonald, Patrick McGrath, Joan Johnson, Isobel Smith. Roxburgh.—Sibella D. Gunn, Elizabeth G. Leslie, Jessie H. R. Mackay, Rosa S. Strutt, Jane H. Watson.

Stirling.—Annie MacMillan, Annie MacDonald, Catherine Macdonald, Christina Penman Curtis, Neil McPherson, Alexander MacDonald, Archibald Robertson.

Ballinasloe. - Anthony Lyons, Patrick Gallagher.

Belfast.—Edith A. Matchett, James Gowdy, William Kingston, Andrew Murray, \*Robert Morrissey.

Cork.—\*James Darcy, Jeremiah Carroll, \*Robert O'Brien, John Murphy, James Healy, Michael Slocum, Michael Falvey, Henry O'Dwyer, John O'Brien.

Downpatrick.—Samuel Beers, James Cochrane, James Cunningham, \*John Graham, \*William Maxwell, John McGreevy, James Ritchie, Robert Smyth, John Strain, Elizabeth Brannigan, Bridget Lenaghen, Elizabeth Lindsay, Mary McKeating, \*Florence McMahon, Joanna O'Neill.

Grangegorman.—Patrick Fleming, James Patterson, Christopher Fitzpatrick, Thomas Manscier, Thomas Hayden, Christopher Keogh, Michael Costello, Anne Kennedy, Ellen Gallagher, Mary Malone, Margaret Hughes, John J. Mullen, James Norris, Robert Woods, Augustus M. Gleeson, Patrick McNamara, Patrick Bourke, Bridget M. Keating, Margaret Connolly, Maureen F. Cavanagh, Sarah McGee, Kathleen Smyth, Mary O'Neill.

Kilkenny.—Thomas Lalor, William Murphy, Denis Brennan, John Walsh, Catherine Kelly, Elizabeth Brennan.

Monaghan.—Caroline Lynch, Maggie McCormilla, Rose Anne Quinn, Bridget Smyth, sen., Mary Woods, \*Lizzie Clarke, Mary Kate McKeever, Katie Reilly, Minnie McCarron, Katie Slowey, Katie Kelly, Kathleen Marron, Philip Murtha, Michael Connell, Charles Smith, Joseph McElroy, John Thistle, Joseph Wilson.

Mullingar.—Eileen Gallagher, Jane Gorman, Alice McCoy.

Omagh.—Mary Glass, Kate McGirr, Bridget McGonigle, Elizabeth Farmer,
Sarah Murray, \*Amy Robb.

Portrane.—Joseph G. Murray, Edward Ryan, Patrick J. Burke, Rosanna Brady, Elizabeth Cooper, Hannah Clifford, Elizabeth Davey, Margaret Rogers, Mary Weston, Kate O'Brien.

Waterford .- \*Thomas Walsh.

South Africa, Bloemfontein.—Petrus Hendrik Potgieter, Frederik Albrecht de Goede, Roelof Wilson Lindeque, Jacobus Stephanus du Plessis, Jan Harm Smith, Johannes Petrus van Niekerk, Hendrik Nicolas Jacobus Dreyer, Stanley Skipper, Jan Jasper Weiss.

South Africa, Fort Beaufort .- Catherina Hermina Christina Lategan.

South Africa, Grahamstown.—Susanna Catharina Cloete, Kathleen Gordon, Charles Manning Groenewald, Adriaan Christiaan De Wet Heunis, Dorothy Elizabeth van der Merwe.

South Africa, Ingutsheni.—Angus Campbell.

South Africa, Pictermaritzburg.—Harriet Luisa Mary Pollock, Susan van der Merwe, Sydney McPherson Downes.

South Africa, Pretoria.—Cornelia Katharina Bosch, Hendrik Botha, Lilian Florence Dent, Ignatius Huntly Ferreira, Lillian May Lawson, Gertruida Gesina Cornelia Lemmer, Anna Magaretha Louisa Moller, Jacoba Louiza Myburgh, Martha Jacoba Prinsloo, Johanna Christina Visser, Miriam Sarah Boutilier.

South Africa, Queenstown.—\*Johanna Victoria Rudman, Robert George Little-ford.

South Africa, Valkenberg.—Anna Jacoba Olivier Haarhoff, Johanna Catheline Rademeyer, Helena Debora Siebrits, Margarheta Susanna Brink, Maria Petronella Elizabeth Albertyn, Anna Susanna Olivier.

#### NURSING OF MENTAL DEFECTIVES CERTIFICATE.

M.A.B., Caterham.—Leah Annie Eden, Alma Lily Sims, Florence Ellen Barratt, Edith Holmes, Gwladys May Collins, Reginald Wm. Anderson,

M.A.B., Darenth.—Dorothy Frances Ballands, Elizabeth Driver, Edith May Thornton.

M.A.B., Leavesden.-Lillian May Keeble, Alice Elizabeth Moore.

Calderstones.—Mildred Townsend, Emily O'Loughlin, Gideon Holgate, Douglas Jack Start, Robert James Murray, Fred Daniels, Thomas Eastham Dugdale.

Monyhull.—Marie Wynniatt, Gladys Maud Jones, Barbara Tillsley, George Bourne.

Rampton State Institution.—Frances Clayton, Elizabeth Fallon, Hilda Ethel Davies Hercombe, Beatrice Rose Watkinson, Cyril Richardson, French George Simmons, Neville Edward Lobley, Patrick Sexton, Selwyn Stanley Hollindale, Mathew Albert Holland, Horace Robert Bowman, Eva Charlesworth.

Royal Earlswood.—Dorothy Annie Lawrence.

Royal Scottish National Institution.—Margaret Beattie, Annie Coutts, Helen Keating, Evelyn Terrace.

Stoneyettes .- Augustus Clarke, Agnes Forsyth McAulay. South Africa, Witrand Institution .- Helena Eliza Michel, Jan Petrus Louw. South Africa, Alexandra Institution.-Maud Amelia Helena Howes, Johanna Dorothea Zeeman, Margaretha Louisa Roux.

> D. RAMBAUT, Registrar.

St. Andrew's Hospital, Northampton; September 10, 1926.

#### APPOINTMENTS.

FLEMING, G. W. T. H., M.R.C.S.Eng., L.R.C.P.Lond., D.P.M., Deputy Medica Superintendent, Dorset County Mental Hospital, Herrison, near Dorchester.

#### NOTICES OF MEETINGS.

Special Meeting.—November 15, 1926, to hear an address by Dr. Adler, 4 p.m., Great Hall, British Medical Association House, Tavistock Square, London.

Quarterly General Meetings.-November 16, 1926, at Horton Mental Hospital Epsom; February 15, 1927; May 17, 1927 (provisionally).

South-Eastern Division.—October 7, 1926, at Ticehurst House, Sussex.

South-Western Division.—October 28, 1926, at the City Mental Hospital, Hereford.

Northern and Midland Division .- October 28, 1926, at Cheadle Royal, Cheadle,

Scottish Division.—November 19, 1926, at Gartloch Mental Hospital, Gartcosh. Irish Division.—November 4, 1926, at the Royal College of Physicians, Kildare Street, Dublin.

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ADLARD AND SON, LIMITED, LONDON AND DORKING.

# Bye-Laws\*

OF THE

# ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION.

Revocations and Alterations adopted at the Annual Meeting held at Wakefield on July 11, 1928, and allowed by the Lords of His Majesty's Most Honourable Privy Council, October 29, 1928.

Payment and Privileges of Members.

20. Delete in line 3 "except that of voting."

#### Divisions.

25. After "own," line 2, add "Chairman and."

After "business," in line 3, add "Each Division shall appoint annually a Standing Committee of Management, the retiring members to be eligible for immediate re-election. Each Division shall have the power to appoint other Standing Committees, but only with the sanction of, or at the request of, the Council. Each Division may appoint Special Committees at its pleasure."

After "Council," line 5, add "The Chairman of a Division (a Vice-President virtute officii) shall be one of its Representative Members of the Council. He shall be appointed annually and be eligible for re-appointment for two years, after which he shall not again be eligible. His appointment shall be made by show of hands or ballot, and shall follow immediately upon the election of Representative Members of the Council."

<sup>\*</sup> Should be inserted at the end of the Copy of the Bye-laws, opposite page 593, October Number of the Journal, 1926.

# Officers.

31. After "President," line 2, add "Vice-Presidents."

After "Journal," line 5, add "and Librarian."

32. After "Divisional," line 1, add "Chairman and."

#### The President.

33. After "Association," line 5, delete "of its Division."

#### Vice-Presidents.

35A. The Chairman of a Division (Vice-President virtute officii) shall, when present, preside at ordinary meetings of his Division and at meetings of the Divisional Committee of Management. He shall be under no obligation to preside at meetings of Special Committees, but shall be an ex-officio member of all Committees appointed by his Division.

35B. He shall, as far as possible, become personally acquainted with all new members of his Division and shall ascertain their particular interests and needs, and shall put them in communication with the appropriate branch or branches of the Association's work.

## The Treasurer.

- 36. After "of," line 6, add "Division or."
- 38. After "Accounts," line 4, add "(including separate accounts of the Maudsley Bequest and Gaskell Fund)."

#### Divisional Secretaries.

- 48. At the end add "They shall be ex-officio members of all Committees of their respective Divisions."
- 49. After "the," sub-paragraph (e), line 1, add "Chairman and."
- 49A. He shall submit all agendas of ordinary Divisional meetings and meetings of the Divisional Committee of Management to the Chairman of his Division for consideration and approval before issue.

#### The Editors.

50. At the end add "who may appoint one or more Assistant Editors as found necessary."

#### The Librarian.

- 61A. The Librarian (subject to the Library Committee) shall have charge and be responsible for the good order of the Library and the custody of its contents.
- 61B. He shall attend at the Library frequently and reside in or near London.
  - 61c. He shall have the direction of the Assistant Librarian.

### The Council.

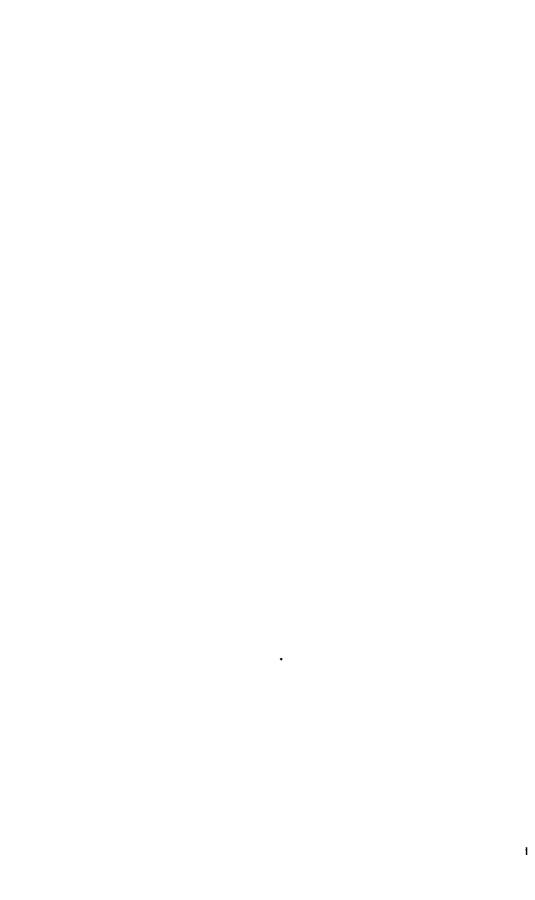
71. After "annually," line 7, add "but shall be eligible for election as Junior Examiner."

#### Committees.

- 75. At the beginning of line 4 add "With the exception of the Nominations Committee."
- 78. Delete and substitute "The Library Committee shall legislate, subject to report to the Council, for the good order and utility of the Library, the custody, replenishment and cataloguing of its contents, the loan and return of books, and the purchase and circulation of appropriate journals."
  - 81. To "purpose," line 9, add "s."

#### Forms C and D.

Appropriate additions consequent on the creations of new offices.



# Bye-Laws\*

OF THE

#### ROYAL.

## MEDICO-PSYCHOLOGICAL ASSOCIATION.

Adopted at the Annual Meeting held in London on July 13, 1926.

#### Classes of Members.

1. The Association shall consist of three classes: (a) Ordinary Members, (b) Honorary Members, and (c) Corresponding Members.

# Qualification and Election of Ordinary Members.

- 2. Medical Practitioners who are registered in the United Kingdom under the Medical Acts; Medical Practitioners who reside in any part of the British Empire and are so registered; and Medical Practitioners who hold such medical qualifications as satisfy the Council shall be qualified for election as Ordinary Members.
- 3. (a) Every Candidate for admission to the Association as an Ordinary Member shall be proposed or recommended by three Members, of whom one at least shall be personally acquainted with him.
- (b) The proposers of such Candidate shall send to the General Secretary, or the Secretary of the Division in which the Candidate resides, a proposal in writing, setting forth the full Christian name and surname of the Candidate, with address, qualifications, and appointments, if any.
- (c) A list of such Candidates who have been duly proposed since the last Meeting shall accompany the circular convening such Annual, Quarterly, or Divisional Meeting, and no Candidate shall be submitted for election whose name does not appear on such list.
  - \* Supplement to the Journal of Mental Science, October, 1926.

- 4. The election of Ordinary Members shall take place at the Annual, Quarterly, and Divisional Meetings, and shall be by ballot, and no such Candidate shall be declared elected unless he shall have in his favour three fourths of the total number of Members balloting. Such Candidates may be voted for as a whole, but in the event of a single black ball each shall be separately voted for until a Candidate is reached for whom a black ball is cast, after which the remaining Candidates shall be voted for as a whole, and the election shall proceed as before.
- 5. A list of all Ordinary Members elected at Divisional Meetings shall be forthwith forwarded by the Secretary for the Division in which such Meeting is held to the General Secretary; and such list shall contain the full name, address, and qualification of each such Member elected.
- 6. Every person elected an Ordinary Member shall forthwith receive notice of the fact in writing from the General Secretary, but no election of an Ordinary Member shall be considered complete until the person elected has paid his subscription and signed, either in the books of the Association or by means of a copy transmitted to him by the General Secretary, the following obligation:—"I hereby promise that I will promote the objects of the Royal Medico-Psychological Association to the best of my ability, and I admit that I am bound by its Charter and Bye-laws and Regulations for the time being in force."
- 7. The election or re-election of every person as an Ordinary Member shall be entered on the Minutes of the Meeting and recorded by the General Secretary in the Register of Members; but if it should appear upon a ballot that any person proposed is not elected, no notice of the decision arrived at shall be taken in the Minutes.

# Qualification and Election of Honorary Members.

8. Distinguished members of the medical profession and others who are eminent in psychology or in those branches of science that are connected with the service of insanity, or who have rendered signal service to the cause of humanity in relation to the treatment of the insane, or to the Association, shall be qualified for election as Honorary Members.

- 9. The number of Honorary Members elected annually shall not exceed three, and the total number shall not exceed forty.
- 10. The election of Honorary Members shall be conducted in the same manner as that provided by Bye-laws 3 and 4 and for the case of Ordinary Members, with the exception that (a) they shall be elected only at Annual Meetings, (b) they shall be recommended by six Members (personal acquaintance not being requisite), (c) they shall be approved by the Nominations Committee and the Council. The names of Candidates shall be printed, with the names of Members recommending them, on the Agenda of the Annual Meeting at which they will be proposed for election.
- 11. As soon as convenient after their election, Honorary Members shall be presented with a diploma in the form A appended to these Articles, and signed by the President, General Secretary, and at least four Members of the Council.

# Qualification and Election of Corresponding Members.

- 12. British, Overseas Dominion, Colonial and Foreign physicians residing abroad may be elected Corresponding Members.
- 13. Corresponding Members shall be elected in the same manner as Honorary Members, but their recommendation shall require the signatures of only four Ordinary Members.
- 14. Corresponding Members shall as soon as may be after their election receive a diploma in the form B appended to these Bye-laws, and signed by the President, General Secretary, and at least four Members of the Council.

# Withdrawal and Expulsion of Members.

- 15. Any Member of the Association may withdraw from it on signifying his desire to do so by letter under his hand addressed to the General Secretary, but such resignation shall not in the case of an Ordinary Member take effect until his subscription is paid up to the end of the year then current.
- 16. Any Member whose name has been removed from the Medical Register shall *ipso facto* cease to be a Member of the Association.

- 17. Any Ordinary Member who shall in respect of two successive years omit, after a special application of the Treasurer, to pay his annual subscription, shall be reported by the Treasurer to the Council, who may give directions for the removal of the name of the defaulting Member from the roll of the Association, or may take such action with regard to him as it decides upon.
- 18. Whenever there shall appear cause in the judgment of the Council for the expulsion of any Member from the Association, a minute shall be made thereof, and a copy of such minute sent forthwith in a registered letter by the General Secretary to the Member in question, who shall be invited to attend the next Meeting of the Council. If, after further consideration at their next Meeting, the Council still regard the expulsion of the Member as advisable, they shall frame a resolution to that effect, which shall be submitted to the next Annual Meeting and decided by ballot, a majority of three fourths of the Members voting being required to carry the resolution.

# Payments by and Privileges of Members.

- 19. The annual subscription of each Ordinary Member shall be one and a half guineas, or such larger sum, not exceeding two guineas, as may be determined by the Annual Meeting. Subscriptions for each year become payable on the 1st January in that year. Ordinary Members elected after the 1st July shall pay a subscription of one guinea only for the year of their election, or they may delay taking up their election until the succeeding 1st January. Ordinary Members shall be entitled to receive gratis the JOURNAL of the Association and such supplements as the Council may authorise to be issued without extra payment. In the event of any member being in default in the payment of his annual subscription he shall only be entitled to receive the JOURNAL on payment of the usual published charge therefor.
- 20. Honorary Members shall be exempt from all payments to the Association, and shall enjoy all the privileges of Ordinary Members except that of voting.
- 21. Corresponding Members shall be exempt from all payments to the Association, and shall enjoy the privilege of

attending the Meetings of the Association and of introducing friends to them in the same manner as Ordinary Members, but shall not be entitled to any further privileges without special leave granted by the Association.

#### Divisions.

- 22. There shall be Divisions of the Association for the cultivation of science in relation to mental disorder, the improvement of the treatment of the insane, and the promotion of good-fellowship among its Members.
- 23. Upon the application of a sufficient number of Members the Association, on the recommendation of the Council, may constitute a new Division of the Association in any locality of the United Kingdom or in the Dominions Overseas or the Colonies thereof.
- 24. No Division shall have the power to speak or act in the name of the Association, or to commit the Association to any engagement.
- 25. Each Division shall have power to hold meetings, to appoint its own Secretary, to elect Members of the Association, and to conduct its own business. Each Division shall annually elect Members to act as representatives of the Division on the Council.
- 26. The appointments of the Divisional Secretaries and the election of Representative Members shall proceed upon voting papers issued to Members of Divisions at the same time as the Agenda papers for the Divisional Meeting at which such appointment or election is to take place. These voting papers shall be in Form E appended to these Bye-laws and shall show the names of those proposed for election, together with the names of six Members of the Division recommending each; but no recommendation of any Member shall be made until his consent to serve shall have been obtained. Any ordinary Member of the Division may vote by deleting the name or names of any or all the proposed members and by substituting the name or names of any other Member of the Division whose consent to serve has been received. In such case it shall not be necessary for such last mentioned member to have been recommended by six members of the Division as aforesaid. Voting papers must be handed in at the Meeting at which

election takes place, or must be sent by post to the Divisional Secretary so as to reach him seven clear days before the said Meeting. The voting papers shall be subjected to the scrutiny of the said Meeting, and the results of election shall be declared and reported by the Divisional Secretary to the General Secretary in time for that Meeting of Council which is held at least two months before the Annual Meeting of the Association. In the event of equality of votes the Divisional Meeting shall decide any question thus raised. On an application by a Divisional Secretary the Council may authorise elections to be held by show of hands instead of by ballot. At the Meeting at which such election is to take place any Member may move a resolution that the election shall be by ballot, and if such resolution is carried by a majority of at least two-thirds present at such Meeting the election shall be postponed to take place in accordance with the provisions of this Bye-law at a Special Divisional Meeting to be held within 14 days of the Meeting at which such resolution was carried.

- 27. All Members of the Association shall have a right to attend any of the Divisional Meetings and take part in all business of the Meetings, save such as refers to the internal management of the Division.
- 28. The expenditure of each Division shall be subject to the control of the Council, and no expenses shall be incurred by a Division without the Consent of the Council, except those necessary for convening and holding its Meetings, and for election of Representatives and Secretary.
- 29. A Divisional Meeting may transmit through its Secretary a Resolution to the General Secretary with a demand that such Resolution be discussed at the next Annual or Quarterly Meeting; but such Resolution must be sent to the General Secretary in time to be placed on the Agenda of the Annual or Quarterly Meeting, and must be submitted by him to the Council for consideration.
- 30. The Association may, at an Annual Meeting, on the recommendation of the Council, dissolve a local Division, provided that a notice to dissolve such Division be placed on the Agenda of the business to be considered at the Meeting.

# Officers.

- 31. The Officers of the Association shall consist of a President, President-elect, ex-President, Treasurer, General Secretary, Registrar, Divisional Secretaries, Chairman, Vice-Chairman and Secretaries of Standing Committees, and Editor or Editors of the JOURNAL, all of whom shall hold office for one year from the date of their election, unless otherwise directed by these Bye-laws, and all Officers shall have such paid clerical assistance as from time to time shall be determined by the Council.
- 32. The Officers, with the exception of the Divisional Secretaries, the Chairmen, Vice-Chairmen and Secretaries of Standing Committees, shall be nominated in manner provided by Bye-law 73, shall be elected in manner provided by Bye-law 67, and shall assume office on the taking of the chair by the President for the ensuing year.

#### The President.

- 33. The President for the ensuing year shall enter on his duties after the private business of the Annual Meeting has been disposed of or adjourned, and shall then deliver his inaugural address. He shall preside at all Meetings at which he is present, of the Association, of its Divisions, and of the Council.
- 34. He shall have the same right of voting as an Ordinary Member, and in the case of an equality of votes shall have a second or casting vote.
- 35. He shall regulate the proceedings of the Annual and other Meetings in accordance with the Articles and these Byelaws, and shall maintain order.

# The Treasurer.

36. The Treasurer shall receive for the use of the Association all sums of money due to it, and shall pay and disburse all sums of money that may be due by the Association, and shall see that every payment exceeding  $\pounds_5$  in amount is

authorised in writing by the President and either an Editor, General Secretary, Registrar, or Chairman of Committee in whose department or in whose Committee respectively the liability for such payment has been incurred, and report in writing to the Council at its Meetings.

- 37. All moneys received for the use of the Association shall be paid into a separate banking account in the name of the Association.
- 38. The Treasurer shall keep accurate accounts of all his receipts and payments on behalf of the Association, and shall present a report at each Annual Meeting, together with the Revenue Accounts and Balance-sheet for the year last ending before such Annual Meeting.
- 39. He shall engage the services of a professional accountant to assist him in the preparation of the accounts.
- 40. He shall invest in securities in which Trustees are for the time being by law authorised to invest, in the name of the Association, such sums of money as the Council may from time to time direct.
- 41. He shall intimate to each Ordinary Member of the Association at the proper time that his annual subscription is due, and on receipt of the same shall transmit to such Member a printed and numbered check receipt signed by him, on the counterfoil of which in the book from which all such receipts must be taken he shall enter the name of the Member and the date of payment.
- 42. He shall make a second demand for the payment of annual subscriptions at the end of three months after the time at which they may have become due, of such Members as shall then have neglected to pay them, and he shall report to the Council, as required by Bye-law 17, the names of all Members who have failed to discharge their obligations to the Association.

#### The Auditors.

43. Two Auditors shall be appointed annually by the Association in Annual Meeting, on the recommendation of the Nominations Committee and the Council. These Auditors shall not be chosen from the Council, but from the unofficial Members of the Association.

- 44. The accounts of the Treasurer shall be balanced yearly, and shall be examined by the Auditors at such times as they may appoint; and a short time preceding the Annual Meeting a report shall be prepared by them showing the financial position of the Association and the balance in the Treasurer's hands, and making such suggestions as may seem expedient.
- 45. The Report of the Auditors shall be printed and presented to the Annual Meeting of the Association, and shall be published in the next ensuing number of the JOURNAL.

# The General Secretary.

- 46. The General Secretary shall carry on the correspondence of the Association (except as is otherwise provided in these Bye-laws), summon Annual, Quarterly, and Special Meetings when due, or when called upon by competent authority to do so, prepare reports (for which he may obtain the services of a reporter) of all such Meetings for publication in the JOURNAL, enter in proper books minutes of all such Meetings, summon Meetings of the Council, as required in these Bye-laws, and enter in proper books minutes of Council Meetings, keep a Register of Members and send a copy thereof annually to the Editors, send to the Editors for publication in the JOURNAL the yearly official lists of the Association, and perform such other duties as are required by the Articles or by these Bye-laws and other the regulations for the time being in force
- 47. The General Secretary shall inform Ordinary, Honorary, and Corresponding Members of their election, and shall be responsible for their names being enrolled in the Register of Members.

# Divisional Secretaries.

- 48. The Divisional Secretaries shall from time to time convene Meetings of their respective Divisions in accordance with Bye-law 27, shall send notices of such Meetings to the Editors of the JOURNAL, shall keep minutes of the Meetings and shall report forthwith to the General Secretary the names, addresses, and qualifications of all Members elected at Meetings of their respective Divisions.
  - 49. The Secretary of each Division shall report to the

Council at the last Meeting of the Council held at least two months before each Annual Meeting—

- (a) The number of Members belonging to his Division.
- (b) The number of Meetings held by the Division since the last report.
  - (c) The number of Members present at each such Meeting.
- (d) The expenses which have been incurred in connection with such Meetings.
- (e) The names of the Secretary and of Representative Members of Council elected by the Division.

#### The Editors.

- 50. The JOURNAL of the Association, under the designation of the *Journal of Mental Science*, shall be published quarterly or at such times as shall be determined by the Council, and shall be conducted by an Editor or Editors.
- 51. The Editors shall be responsible for the management of the JOURNAL and for such of its contents as are not signed with the names of the writers.
- 52. The JOURNAL shall be forwarded to every Ordinary and Honorary Member free of charge. On payment of the full subscription for the year the former shall be entitled to a complete set of the numbers of the JOURNAL for that year.
- 53. After the payment of the ordinary working expenses of the year of the Association, including the publication of the JOURNAL, the surplus funds in the hands of the Treasurer may be appropriated in special aid of the JOURNAL in such amounts as the Council may from time to time determine.
- 54. Any Member objecting to the decision of the Editor or Editors, or to the manner in which the JOURNAL is conducted, or feeling aggrieved by any comments in the JOURNAL, may appeal to the Annual Meeting; but before doing so he shall submit to the Council any objection or complaint he may desire to make.
- 55. The Editors shall insert in each number of the JOURNAL the date and place of the next Meeting of the Association. A complete list of the Officers, and Honorary, Corresponding, and Ordinary Members of the Association, a roll of past Presidents, of past Maudsley Lecturers, of holders of the

Gaskell Gold Medal, of holders of the Association's Bronze Medal, and a list of recognised Training Institutions for the Nursing Certificates shall be printed annually in the number of the JOURNAL published in January.

56. Any Member who has spoken at an Annual, Special, Quarterly, or Divisional Meeting shall be entitled on application to the Editors to a draft of his speech for correction, provided no delay occurs thereby in the issue of the JOURNAL. All papers read at the Annual, Quarterly, or Divisional Meetings of the Association shall be the property of the Association, unless the author shall have previously obtained the written consent of the President, after consultation with the Editors, to the contrary.

# The Registrar.

- 57. The Registrar shall have the management of the business and arrangements of, and shall carry on all correspondence in connection with the Certificates in Psychological Medicine, the Gaskell Prize, the Prize Dissertation, the Certificates of Proficiency in Nursing and other Examinations held under the authority of the Association.
- 58. As soon as possible after each Examination he shall send a list of the successful candidates to the Editors for publication.
- 59. He shall keep a Register containing the names of all those who have received Certificates in Psychological Medicine and Prizes, and record the dates on which such Certificates and Prizes were awarded.
- 60. He shall keep a Register containing the names of all those who have received Certificates of Proficiency in Nursing.
- 61. He shall report to the Educational Committee, and thereafter to the Council without unnecessary delay, any complaints which may be brought to his notice respecting the holders of the Nursing Certificates of the Association, and shall, if instructed to do so by a minute of the Council, remove the name of any holder from the Register, at the same time placing on record therein the reason for doing so.

# The Council.

62. The affairs of the Association shall, subject to the Charter and Bye-laws, be managed by a Council consisting of

the Officers, who shall be ex-officio members thereof, and non-official members of the Association.

- 63. The non-official Members of the Council shall be of two classes: (1) Representative Members of Council and (2) Nominated Members of Council.
- 64. The Representative Members of Council shall be elected annually by the Divisions, subject to the following regulations:
- (a) Each Division having a membership of less than 150 shall elect two Representative Members of Council.
- (b) Each Division having a membership of 150 or more shall elect one Representative Member of Council for each complete fifty of its membership.
- (c) Of the Representative Members of Council elected by any Division having a membership of 200 or more, one at least shall be an Assistant Medical Officer as defined by Bye-law 112.
- (d) The election shall be carried out in manner provided by Bye-law 26.
- 65. The Nominated Members of Council shall be elected at each Annual Meeting, subject to the following regulations:
- (a) One Nominated Member of Council shall be elected for every two Representative Members of Council elected under Bye-law 64.
- (b) Such additional Nominated Members of Council shall be elected as shall bring up the number of the non-official Members of the Council to eighteen.
- (c) Of the Nominated Members of Council such number shall be Assistant Medical Officers as shall bring up the number of Assistant Medical Officers elected to be non-official Members of the Council to four.
- 66. No non-official Member of the Council shall be eligible to hold office for more than three successive years, but he may be re-elected at the Annual Meeting after that at which he retires, or at any succeeding Annual Meeting, except as provided by Bye-law 68.
- 67. The election of the Officers of the Association and of the Nominated Members of Council shall be carried out in the following manner:
  - (a) The General Secretary shall send to each Member of the

Association with the circular convening the Annual Meeting a list in the Form C appended to these Bye-laws, of all the Officers and Members of the Council for the year about to expire, against the names of each of whom shall be placed the number of all his attendances at the Council Meetings for the past two years, in such manner as to show the number of possible and actual attendances.

- (b) The General Secretary shall at the same time send to each Ordinary Member a voting paper in the Form D appended to these Bye-laws, showing the offices vacant, the number of vacancies then impending for Nominated Members of the Council, and the nominations made thereto by the Council under Bye-law 73. The names of a sufficient number of Members who have consented to serve to fill the vacancies on the Council shall be placed on the voting paper by the Council, such list to be furnished to all ordinary Members one month before the Annual Meeting, so that any ordinary Member may have power to vote for the election of Officers of the Association and nominated Members of the Council by deleting the name or names of any or all of the proposed Members, and substituting the name or names of any other Member or Members of the Association whose consent to serve has been received.
- (c) Voting papers must be handed in at the Annual Meeting, or sent by post to the General Secretary so as to reach him at least seven clear days before the Annual Meeting. Such papers must be legibly marked on the outside "Voting Paper," and shall be opened by the Scrutineers only at the Annual For the election of Officers only the votes of Members present at the Meeting shall be counted. that the Council shall have the same power to authorise elections by a show of hands as is contained in Bye-law 26, with reference to Divisional elections, except that any application under this Bye-law shall be made by the General Secretary instead of a Divisional Secretary. If at the Meeting at which an election by a show of hands has been approved by the Council, objection to this form of voting is raised, then the remainder of Bye-law 26 will apply, save that the election will take place at a Special Meeting of the Association, not at a Divisional Meeting.
  - (d) The President shall appoint from the Members present

at the Annual Meeting two or more Scrutineers, who shall count the votes and report the result to him.

- (e) The President shall declare those Members elected who have received the largest number of votes, and in the event of an equality of votes shall declare that Member elected who has belonged to the Association for the longest time. Provided, nevertheless, that for the purpose of obtaining the requisite number of Assistant Medical Officers in accordance with Bye-law 65 (c) (but not further or otherwise), a candidate who is such an officer shall be declared elected in preference to another candidate not so qualified, although the latter may have received an equal or larger number of votes.
- 68. In the event of a vacancy in the Council occurring between the time of the Annual Meetings, the Council may co-opt a Member to fill the vacancy until the next Annual Meeting, except in the case of a Representative Member of Council, in which case the Division may elect a Member to fill the vacancy until the next Annual Meeting; and such temporary co-option or election shall not disqualify, as under Bye-law 66, such Member from being immediately re-elected.
- 69. The Council shall meet not less than four times a year, at such times as shall be fixed at the Annual Meeting, and at such places as the President shall appoint. Six shall form a quorum.
- 70. The Secretary shall send an Agenda paper to each Member of the Council before each Meeting of the Council.
- 71. On the nomination of the Educational Committee the Council shall appoint six Examiners for the Certificate of Psychiatry—two for England, two for Scotland, and two for Ireland; in the case of the English Examiners one shall be specially qualified to judge in Research work. The Senior Examiner for each division of the Kingdom shall retire annually. The Council shall similarly appoint Examiners for the Preliminary and Final Examinations for the Nursing Certificates, the senior of whom in each case shall retire annually.
- 72. At least six weeks before each such Meeting the President or Council shall determine the place at which each Annual and Quarterly Meeting shall be held.

73. The Council shall prepare a report upon the general state and proceeding of the Association each year, and shall submit the same to the Annual Meeting. Not less than six weeks before each Annual Meeting the Council shall consider the recommendations of the Nominations Committee and nominate Members for election at the Annual Meeting as officers, and Nominated Members of Council for the ensuing year.

#### Committees.

- 74. Committees of the Association shall be of two kinds-
  - (a) Standing.
  - (b) Special.
- 75. Standing Committees shall be appointed by the Association at an Annual Meeting, and shall continue in office subject to any alteration in their constitution by an Annual Meeting. They shall report to the Annual Meetings, and may report to a Quarterly Meeting. The Standing Committees shall be—
  - (a) Parliamentary.
  - (b) Educational.
  - (c) Library.
  - (d) Research and Clinical.
  - (e) Nominations.
- 76. The Parliamentary Committee shall be empowered to watch the course of legislation which may affect the insane or those who have to deal with the insane, and to take such measures with regard to such legislation as it may decide upon.
- 77. The Educational Committee shall be entrusted with the regulations of the Examinations for the Certificates of the Association and such other matters touching the teaching of Psychiatry, including post-graduate education in relation to degrees and diplomas in Psychological Medicine of the Universities and Medical Schools, and nursing as are delegated to it by the Association or by the Council. The Registrar and the Examiners shall be ex-officio Members of the Committee.
- 78. The Library Committee shall have charge of the Library belonging to the Association, and shall keep the Council informed of the business thus entrusted to them.

- 79. The Research Committee shall have as its object the encouragement and guidance of original work in psychiatry. Also the collection of clinical, pathological and other statistics of interest to psychiatry and the furtherance of clinical psychiatry generally.
- 80. The Nominations Committee shall consist of the President, the two immediately preceding Past-Presidents surviving, the Treasurer, the General Secretary, the Divisional Secretaries, and one of the Editors. They shall recommend to the Council, at the Meeting held at least six weeks before the Annual Meeting, Members for nomination by the Council under Byelaw 73 other than the President elect. They shall also annually revise the lists of names on the Standing Committees, and adjust the same for the consideration of the Council. They shall also in their discretion nominate as Honorary and Corresponding Members those whose names are proposed under Bye-laws 10 and 13 for the consideration of the Council.
- 81. Special Committees may be appointed at any Meeting of the Association for any purpose which, in the opinion of the Meeting, can best be served by the appointment of a Committee. Provided that no Committee shall be appointed for the revision of the Articles or Bye-laws or other Rules and Regulations for the time being in force, nor for any purpose involving an expenditure of more than £25 of the funds of the Association, except at an Annual or Special Meeting, nor shall any Committee appointed for the latter purpose report to any meeting except an Annual Meeting.
- 82. Every Committee at its first Meeting shall forthwith appoint a Chairman and Secretary, and, if authorised by the Council, a Vice-Chairman.
- 83. Every Committee may incur such reasonable expense as is necessary for the summoning of its Meetings and the record of its proceedings.
- 84. The President and General Secretary of the Association, Treasurer, one Editor and the Divisional Secretaries shall be ex-officio Members of Standing Committees.
- 85. The Reports of all Committees shall be presented to the Council and, if the Council shall deem such course expedient, subsequently wholly or partly read at one of the Meetings of the Association. This Bye-law does not affect

the Annual Reports, which, after consideration by the Council, shall be presented to the Annual Meeting.

86. Committees shall render to the Council an account of all moneys received by them.

# Meetings.

- 87. The Meetings of the Association shall be of three kinds—General, Divisional, and Special—at any of which ten shall form a quorum. General Meetings will be Annual or Quarterly. The dates of the Annual and Quarterly Meetings for each year shall be fixed at the Annual Meeting; but should any necessity arise for altering such dates, such alteration may be made by the General or Divisional Secretary, with the consent of the President, not less than six weeks before the date originally appointed for the Meeting. Notice of all Meetings, other than Special, shall be sent with list of names of Candidates for Membership to the Editors of the JOURNAL, in time for publication if possible.
- 88. The following Standing Orders shall govern the proceedings at Meetings:
- (a) In the absence of the President the Meeting shall elect a Chairman, who, while occupying the Chair, shall have the same powers as the President.
  - (b) No Motion shall be discussed until it has been seconded.
- (c) When a Motion has been made and seconded it shall be put from the Chair, and discussion thereon invited by the Chairman.
- (d) No Member shall speak to the same question more than once, except as provided in Sub-section (i) of this Bye-law.
- (e) At any time after discussion has been invited, and before the Motion has been put to the vote, any Member who has not previously spoken in the debate may propose an Amendment.
- (f) No Amendment shall be entertained until it has been seconded.
- (g) When an Amendment has been proposed and seconded it shall be put from the Chair, and then the debate may proceed on the Amendment and the original Motion together.
- (h) No second Amendment may be moved while a previous Amendment is before the Meeting.

- (i) A Member who has spoken to the original Motion may speak again to the Amendment.
- (j) When the debate is concluded the Chairman shall put the Amendment to the vote. If the Amendment is negatived the original Motion shall again be put and another Amendment may be moved.
- (k) If the Amendment is carried, the question as amended shall be put from the Chair, and further Amendments may be moved.
- (1) Votes shall be taken by a show of hands, the hands being counted by the Chairman and Secretary. If the Chairman and Secretary do not agree as to the numbers there shall be a division, and the Chairman shall decide the manner in which the division shall be taken.
- (m) In case the voting is equal the Chairman shall have a second or casting vote.
- (n) Upon the demand of any two Members present the names of the Members voting and their votes shall be taken down, entered on the Minutes, and published in the JOURNAL.
- (o) Any of the Standing Orders in any case of urgency, or upon any Motion made or a notice duly given, may be suspended at any Meeting so far as regards any business at such Meeting, provided that three fourths of the Members present shall so decide.

# Annual Meetings.

- 89. The General Secretary shall convene in each year an Annual Meeting, at a place to be fixed by the President-Elect or Council not less than six weeks previously, and shall at the earliest possible date issue to each Member of the Association a circular notifying each Member of the forthcoming Meeting and requesting the contribution of papers and other scientific matter therefor.
- 90. A notice convening an Annual Meeting shall be sent to every Member of the Association not less than fourteen days before the date fixed for the Meeting, and shall contain a list of the business to be transacted at the Meeting.
- 91. Any Member who wishes to bring forward any business at an Annual Meeting must state in writing to the General Secretary not less than six weeks beforehand the nature of the business.

- 92. At the Annual Meetings the business shall be taken in the following order:
  - (a) Confirmation of Minutes of preceding Annual Meeting.
  - (b) Election of the Officers and Council.
- (c) Reports of the Council, Officers, and Standing Committees.
- (d) Reports of Special Committees and motions arising therefrom.
- (e) Motions involving alterations of the Charter or of the Bye-laws for the time being in force.
  - (f) Motions involving expenditure of funds.
- (g) Fixing the dates of Annual and Quarterly Meetings of the Association, and of Quarterly Meetings of the Council.
  - (h) Election of Members.
  - (1) Complimentary motions and announcements.
- (j) Other business of which due notice has been given, and motions arising therefrom.

(The above constitutes the private business.)

At midday the Meeting shall adjourn for a short recess, and on reassembling the President for the ensuing year shall take the Chair. He shall, after the completion or adjournment of the private business, present any prizes that may have been awarded and shall thereafter deliver his address, after which papers may be read and discussed.

- 93. A motion involving expenditure of the funds of the Association exceeding £50 may not be entertained except at an Annual Meeting.
- 94. Both the private and the public business of an Annual Meeting may be adjourned jointly and severally to any time or times and place or places agreed on by the Meeting.
- 95. No business shall be transacted at any Annual Meeting notice of which has not appeared in the circular convening the Meeting, unless the introduction thereof has been approved by the Council.

# Quarterly Meetings.

96. Quarterly Meetings, of which there shall be not less than three yearly, shall be held in any of the Divisions of the United Kingdom, and shall be convened by the General Secretary. The place of each Quarterly Meeting shall be fixed by the

President or Council, and announced in the JOURNAL if practicable not less than two months previously.

- 97. Every Member who desires to bring forward any business at a Quarterly Meeting shall give notice thereof in writing to the General Secretary not less than three weeks before the day fixed for the Meeting.
- 98. Not less than fourteen days before each Meeting the General Secretary shall send to each Member a notice of the time and place of meeting, together with a list of the business to be transacted.
- 99. No business shall be transacted at any Quarterly Meeting notice of which has not appeared in the circular convening the Meeting, unless the introduction thereof has been approved by the Council.
- 100. At every Quarterly Meeting the business shall be taken in the following order:
  - (a) Confirmation of Minutes of the last Quarterly Meeting.
  - (b) Complimentary motions and announcements.
  - (c) Reports of Committees and motions arising therefrom.
  - (d) Motions.
  - (e) Election of Members.
  - (f) Reading and discussion of papers.
- 101. No resolution shall be put to the vote at a Quarterly Meeting unless it has been submitted to the President or Council, who may in his or their discretion declare that a vote thereon shall only be taken at an Annual or Special Meeting called for that purpose. But full discussion on the resolution shall be allowed at such Quarterly Meeting.

# Special Meetings.

- 102. A Special Meeting of the Association shall be convened—
  - (a) By the President if he think fit.
- (b) By the President at the written request of six Members of the Council.
- (c) By the President at the written request of twelve Members of the Association.
- 103. The written request to the President must state the nature of the business for which the Special Meeting is to be summoned, and no other business shall be transacted thereat.

- 104. The date of the Special Meeting shall be fixed by the President.
- 105. On resolving to call a Special Meeting, or on receiving a requisition as aforesaid, the President shall give notice to the General Secretary of the object and date of the Meeting to be called.
- 106. The General Secretary shall thereupon send to every Member a notice convening the Meeting and specifying the time, place, and object thereof.

# Strangers at Meetings.

- 107. The President and Council may, in the name of the Association, invite strangers to be present at any Meeting.
- 108. Any Member may introduce a stranger to any Meeting, and the stranger so introduced may join in the discussion but not in the voting.

# Supplementary.

- 109. Subject to the Provision of the Charter and these Byelaws, a notice may be served on behalf of the Association upon any Member, either personally, or by sending it in a prepaid letter addressed to such Member either at his registered address, or at his address in the current volume of the Medical Register; and all such notices shall be deemed sufficient for the purposes of the Charter and Bye-laws.
- 110. Any notice sent through the post shall be deemed to have been served at the time when the letter containing the same would be delivered in ordinary course of post, and in proving such last service it shall be sufficient to prove that the notice was properly addressed and posted.
- III. No proceeding of the Association shall be invalidated by reason of a Member not having received any notice by these Bye-laws required to be given.
- 112. In these Bye-laws, unless there be something in the subject or context inconsistent therewith—
- "The Association" means the Royal Medico-Psychological Association.
  - "Member" means Member of the Association.
- "Annual Meeting" means the Annual General Meeting of the Association.

"Assistant Medical Officer" means an Assistant Medical Officer or Assistant Physician in a Psychiatric or Neurological Institution or Service.

"Quarterly Meeting" means the General Meeting of the Association other than the Annual Meeting or a Special Meeting.

"In writing" means written, lithographed, or printed, or partly written and partly lithographed, or partly printed.

Words importing the singular number only include the plural number, and words importing the plural number only include the singular.

Words importing the masculine gender only include the feminine.

# APPENDIX.

# (FORM A.)

# Sciant Omnes.

Præsidem Concilium et Sodales Societatis Regiæ Medico-Psychologicæ virum doctissimum et ornatissimum inter Socios Honorarios cooptasse.

In cujus rei fidem has literas manibus nostris et Sigillo Societatis munitas libentissime dedimus.

Londini

die Mensis

Anno Domini 19 .

# (FORM B.)

# Sciant Omnes.

Præsidem Concilium et Sodales Societatis Regiæ Medico-Psychologicæ virum spectatissimum in Sodalitium inter Socios Consortes cooptasse.

Cujus rei in testimonium fidemque has literas manibus nostris et Sigillo Societatis munitas libentissime dedimus.

Londini

die Mensis

Anno Domini 19

# (FORM C.)

# ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION.

# COUNCIL FOR THE PAST YEAR.

# Officers.

			No. of
			Attendances at Council
			Meetings during the
			past two years.
President	• • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • •
President-el	lect		•••••
Ex-Preside	nt		
Treasurer .			
General Sec	cretary	•••••	
		y for	
Divisional .	Secretary	y 101	• • • • • • • • • • • • • • • • • • • •
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"	"	,,	
"	"	,,	•••••
Registrar .			
Chairman o	of the Ed	ducational Committee	
,,	" Pa	irliamentary Committee	9
,,	" Re	esearch and Clinical Co	mmittee
		brary Committee	
Vice-Chair	• •	•	•••••
vice chair.			1
Camatamira	·····	ducational Committee	
Secretary o			
"	**	rliamentary Committee	
,,	"	esearch and Clinical Co	
,,	" Lil	brary Committee	•••••
Editors			
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••••	_	_	İ
	0	ther Members of Coun	icil.
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# (FORM D.)

# ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION.

# VOTING PAPER.

# Officers.

Offices Vacant.	Nominations by Council.	Nominations by Member Voting.
President		
President-elect		
Treasurer		
General Secretary		
Registrar		
Editors		
Note.—For the above the votes of the received.		
Nominated Me	mbers of Council.	
Nominations by Council.	Nominations by	Member Voting.
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••••••		
••••••	••••••	· · · • · · · · · · · · · · · · · · · ·
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		• • • • • • • • • • • • • • • • • • • •
	(Signed)	)

Note.—Every Member of the Association is entitled to one vote for each vacancy at each election of nominated Members to the Council, but shall not give more than one vote to any Candidate. Every voting paper which appears to contain more votes than there are vacancies for proposed Members of Council, or which records more than one vote for any Candidate, shall be invalid, and shall not be counted, and no voting paper shall be counted unless signed by the Member voting.

Voting papers must be handed in at the Annual Meeting, or sent by post to the General Secretary so as to reach him at least seven clear days before the Annual Meeting. Such papers must be legibly marked on the outside "Voting Paper," and shall be opened by the Scrutineers only at the Annual Meeting.

In order to vote for the Officers, Members of the Association must be present at the Annual Meeting. In voting papers sent by post, votes for nominated Members of Council only are counted.

# (FORM E.)

# ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION.

# VOTING PAPER

Candidate for post of Secretary of the Division.	Recommended by	Nominations by Members Voting.
r. A. B	I. C. D	
	2. E. F	
	3. G. H	
	4. I. J	
	5. K. L	
	6. M. N	
2. O. P	r. Q. R	
	2. S. T	
	3. U. V	
	4. W. X	
	5. Y. Z	
	6. B. C	
Candidates for post of Representative Member of Council ( to be elected.		
ı. D. E	ı. F. G	
1. 17. D		
	2. H. I	• • • • • • • • • • • • • • • • • • • •
	3. J. K	•••••
	4. L. M	•••••
	5. N. O	
	6. P. Q	• • • • • • • • • • • • • • • • • • • •
2. R. S	1. T. U	
	2. V. W	
	3. X. Y	
	4. Z. A	
	5. B. A	
	б. D. C	
Signad		
Signed		

Note.—Every Member of the Division is entitled to one vote for each vacancy at each election of the Secretary and Representative Members of Council, but shall not give more than one vote to any Candidate. Every voting paper which appears to contain more votes than there are vacancies, or which records more than one vote for any Candidate, shall be invalid, and shall not be counted, and no voting paper shall be counted unless signed by the Member voting.

Voting papers must be handed in at the Divisional Meeting to be held on the day of next, or sent by post to the Divisional Secretary so as to reach him at least seven clear days before the Meeting. Such papers must be legibly marked on the outside "Voting Paper," and shall be opened by the Scrutineers only at the Meeting.

ļ

# The Charter

OF THE

# ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION

DATED MARCH 13, 1926



George the fifth by the Grace of God of the United Kingdom of Great Britain and Ireland and of the British Dominions beyond the Seas, King, Defender of the Faith, Emperor of India:

To all to whom these presents shall come, GREETING:

WHEREAS in the year One thousand eight hundred and forty-one an unincorporated Association known as The Medico-Psychological Association of Great Britain and Ireland was formed for the promotion and cultivation of science in relation to mental disorder and the care and treatment of the insane:

AND WHEREAS on the Ninth day of September One thousand nine hundred and twenty-five we were pleased to grant to the said Medico-Psychological Association of Great Britain and Ireland permission to use the prefix "Royal" and we commanded that the said Association should thenceforth be known as "The Royal Medico-Psychological Association":

AND WHEREAS the said Voluntary Association now existing and known as The Royal Medico-Psychological Association hath petitioned us for a Charter of Incorporation such as is in and by these presents granted:

AND WHEREAS we are minded to comply with the Prayer of such Petitioner:

NOW, THEREFORE, We, by virtue of Our Royal Prerogative in that behalf, and of all other powers enabling Us so to do of our Special Grace, certain knowledge and mere motion do hereby, for Us, our Heirs, and Successors, will, grant, direct, appoint, and declare to the said Voluntary Association as follows:—

1. The persons now Members of the said Voluntary Association known as The Royal Medico-Psychological Association, and all such persons as may hereafter become Members of the Body Corporate hereby constituted pursuant to or by virtue of the powers granted by these Presents, and their Successors, shall for ever hereafter (so long as they continue to be such Members) BE by virtue of these Presents one Body Corporate and Politic by the name of "The Royal Medico-Psychological Association" and by the same name shall have perpetual succession

and a Common Seal, with power to break, alter, and make anew the said Seal from time to time at their will and pleasure, and by the same name shall and may implead and be impleaded in all Courts, and in all manner of actions and suits, and shall have power to do all other matters and things incidental or appertaining to a Body Corporate.

- 2. We do also hereby, for Us, our Heirs, and Successors, license, authorize, and for ever hereafter enable The Royal Medico-Psychological Association hereby incorporated, or any person on its behalf, to acquire for the purposes of the Association any lands, tenements, or hereditaments whatsoever within Our United Kingdom of Great Britain and Ireland, not exceeding in the whole the annual value of five hundred pounds (to be determined according to the value thereof at the time when the same are respectively acquired) and to hold the same in perpetuity and from time to time to grant, demise, alienate or otherwise dispose of the same or any part thereof.
- 3. And We do hereby also, for Us, Our Heirs, and Successors, give and grant Our Licence to any person or persons and any Body Politic or Corporate to assure in perpetuity, or to demise to or for the benefit of The Royal Medico-Psychological Association (hereinafter called "the Association") any lands, tenements or hereditaments whatsoever within Our United Kingdom of Great Britain and Ireland, so as the same do not exceed at any one time the annual value aforesaid.
- 4. The objects and purposes for which the Association is hereby constituted are for the promotion and cultivation of science in relation to mental disease and the improvement in the treatment of persons suffering from mental disorder and to facilitate the exchange of information and ideas on those subjects amongst the Members of the Association and otherwise and for that purpose—
  - (A) To hold periodical and other Meetings of the Association and conferences with other Associations whether in the United Kingdom or elsewhere.
  - (B) To publish such information as may be thought desirable in the form of a periodical journal.

- (c) To print, publish, translate, sell, lend, and distribute any books, pamphlets, or treatises on or connected with science in relation to mental disease, or with the treatment of persons suffering from mental disorder, or with allied sciences, and to cause translations into any language to be made of any such books, pamphlets, or treatises, and to print, publish, sell, lend, and distribute the same in the United Kingdom or elsewhere.
- (D) To make any expenditure which the Association may think fit for sending and maintaining in any part of the United Kingdom or elsewhere any person or persons chosen by the Association for the investigation of science in relation to mental disease, or of the treatment of persons suffering from mental disorder, or of allied subjects, the convening of Meetings, and inviting thereto any person or persons desired by the Association, for discussing and promoting the objects of the Association, and for sending and defraying the expenses of representatives of the Association to any Meetings convened for similar objects in any part of the United Kingdom or elsewhere, and for making researches and observations on subjects connected with psychological medicine.
- (E) The consideration of all questions affecting the interests of the Association and of the medical profession generally in its relation to mental disease, the treatment of persons suffering from mental disorder and subjects, the petitioning of Parliament, or the promotion of deputations in regard to measures affecting the objects for which the Association is established, and the promotion of improvements in the principles or administration of the law relating to mental disease, the treatment of persons suffering from mental disorder, and allied subjects.
- (F) To grant sums of money out of the funds of the Association for the promotion of the objects of the Association in such manner as may be from time to time determined on.
- (G) To promote and encourage the study of science in relation to mental disease, of the

scientific treatment of persons suffering from mental disorder, and of allied subjects:—

- (1) By the provision, institution, and maintenance of lectures, classes, examinations and other means of instruction therein upon such terms and conditions, and upon payment of such fees as the Association may from time to time determine by regulations or otherwise: provided always that the surplus of such payments over the expenditure necessary for the provision, institution and maintenance of such means of instruction shall be devoted to such of the objects of the Association as may be deemed expedient; and
- (2) by the institution, maintenance, and grant of scholarships, prizes, certificates, or other awards, or distinctions, on such terms and conditions as may from time to time be prescribed by regulation or otherwise.
- (H) To establish, or promote branches or local divisions of the Association, whether in the United Kingdom or elsewhere.
- (1) To provide, if the Association think fit, legal assistance to Members of the Association in enforcing or defending their legal rights, whether under the Lunacy Acts or otherwise, if and so far as such assistance may be lawfully afforded, having regard to the laws against maintenance.
- (J) To borrow and raise money for the purposes of the Association and to secure the repayment thereof by bonds, debentures, mortgages, or other securities, or in such other manner as may be determined, and for this purpose to mortgage or charge all or any of the property of the Association.
- 5. The Association shall not carry on any trade or business or engage in any transaction with a view to the pecuniary gain or profit of the Members thereof. No Member shall have any personal claim on any property of the Association or make any profit out of his Membership, except in the case of and as a salaried Officer of the Association.
- 6. There shall be a Council of the Association consisting of the Officers of the Association and of such number of Members with such qualifications

and to be elected or constituted as such Members of Council in such manner and to hold office for such period, and on such terms as to re-election, and otherwise, as the Bye-laws for the time being of the Association shall direct.

- 7. The Association shall have such Officers, with such functions, tenure, and terms of office, as the Bye-laws of the Association may prescribe and such other Officers and Servants as the Council of the Association may from time to time appoint.
- 8. Among the Officers of the Association there shall be a President, a President-elect, an Ex-President, a Treasurer and a General Secretary. The said Officers shall be nominated and elected in such manner, and shall hold office for such period, and on such terms as to re-election and otherwise, as the Bye-laws for the time being of the Association shall direct.
- 9. The Council shall have the management and control of the Association and its affairs subject to the provisions of these presents and to the Bye-laws of the Association, and may subject as aforesaid do all such things as appear to the Council to be necessary or expedient for giving effect to the objects of the Association. The business of the Council shall be conducted in such manner as the Council may prescribe.
- 10. Unless and until the Bye-laws of the Association shall otherwise provide there shall be three classes of Members of the Association, namely:

  (A) Ordinary Members, (B) Honorary Members, and
  (C) Corresponding Members. The Members of the said Voluntary Association, the Royal Medico-Psychological Association who by virtue of these Presents become Members of the Association shall be deemed to have entered the Association as Members of the same class as that to which they belonged in the said Voluntary Association.
- 11. The qualifications, method and terms of admission, privileges, and obligations, including liability for expulsion or suspension of Members of each of the said classes respectively, shall be such as the Bye-laws for the time being of the Association shall direct.

- 12. A General Meeting of the Members of the Association entitled under the Bye-laws to be present and vote thereat shall have power from time to time to make such Bye-laws of the Association as to them shall seem requisite and convenient for the government, and advantage of regulation, Association, its Members and property, and for the furtherance of the objects and purposes of the Association, and from time to time to revoke, alter or amend any Bye-law theretofore made so that the same be not repugnant to these Presents or to the Laws and Statutes of this our Realm: Provided that no such Bye-law, revocation, alteration, or amendment shall take effect until the same shall have been allowed by the Lords of Our Privy Council of which allowance a Certificate under the hand of the Clerk of Our Privy Council shall be conclusive evidence.
- 13. The first Bye-laws to be made under these Presents shall be made by a General Meeting of the Members of the Association entitled to be present and vote thereat within the period of six months from the date of these Presents, unless the Lords of Our Privy Council shall see fit to extend such period, of which extension the Certificate of the Clerk of Our Privy Council shall be conclusive evidence.
- 14. Pending the making and approval of the Bye-laws to be made under these Presents but no longer the Articles of Association of the existing Voluntary Association known as The Royal Medico-Psychological Association and the Bye-laws made thereunder shall be the Bye-laws of the Association. and shall have effect as though the Association, its Officers and Members, had therein been referred to throughout in lieu of the said Voluntary Association, its Officers and Members.
- 15. The property and moneys of the Voluntary Association known as The Royal Medico-Psychological Association shall from the date of these Presents become and be deemed to be the property and moneys of the Association and shall as soon as may be be formally transferred to the Association or such person or persons on its behalf as the Bye-laws may prescribe.
- 16. And We do hereby for Us, Our Heirs and Successors, Grant and Declare that these Our Letters

Patent or the enrolment or exemplification thereof shall be in all things good, firm, valid and effectual according to the true intent and meaning of the same and shall be taken, construed and adjudged in all Our Courts or elsewhere in the most favourable and beneficial sense and for the best advantage of the said Association, any mis-recital, non-recital, omission, defect, imperfection, matter or thing whatsoever notwithstanding.

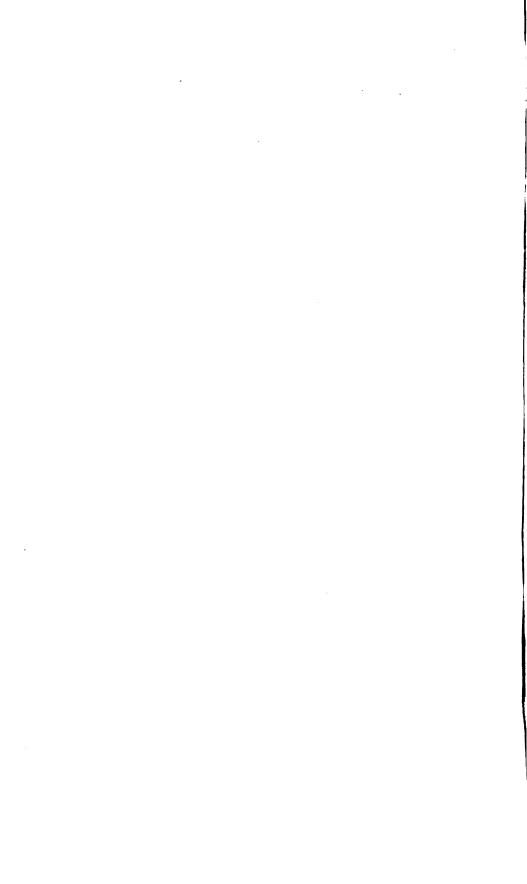
IN WITNESS whereof We have caused these Our Letters to be made Patent.

Witness Ourself at Westminster the 13th day of March in the year of Our Lord One thousand nine hundred and twenty-six and in the sixteenth year of Our Reign.

BY WARRANT UNDER the King's Sign Manual.

SEAL.

SCHUSTER.



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of the

INTERNATIONAL PSYCHO-ANALYTICAL ASSOCIATION

Edited by ERNEST JONES

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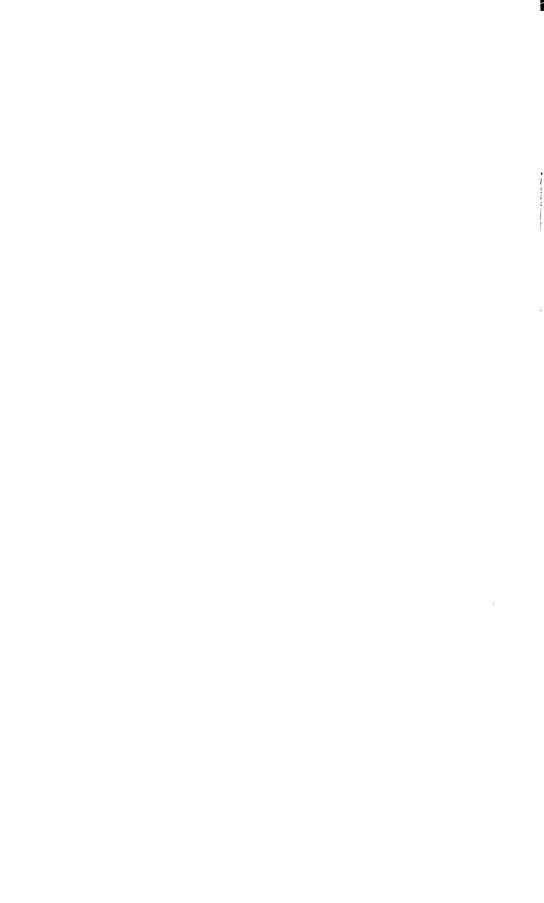
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